

THE PROFESSIONAL

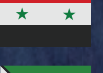
EDGE

ISSUE 163

JULY/AUGUST 2016



My New Home, Saskatchewan



EXPAND YOUR HORIZONS



Saskatchewan is known as “the land of living skies” – a place with an endless horizon.

Join students from across the globe, as they expand their world at Levene GSB. Offering the Levene MBA with a specialization in engineering management, Levene GSB is a growing destination for upwardly mobile individuals looking for advanced skills in management. The Levene faculty prepare students to lead in business through critical reflection, personal connection, and consideration for the global community. With an international study tour included as part of every MBA program, we ensure our students graduate with the skills and abilities to lead and inspire our world. Visit us at

levene.uregina.ca

levene | gsb

Kenneth Levene Graduate School of Business

University
of Regina



INTERNATIONAL EXPOSURE | INTERNSHIP OPPORTUNITIES | SPECIALIZED & FLEXIBLE PROGRAMS



Achieving a Safe and Prosperous Future through Engineering and Geoscience

Professional Edge Committee

Robert Schultz, P.Eng. - Chair
 John Styles, P.Eng., FEC - Vice-Chair
 Zahra Darzi, P.Eng., FEC
 Marcia Fortier, P.Geo.
 Brett LaRoche, P.Eng. - Liaison Councillor
 Ken Linnen, P.Eng., FEC
 Brent Marjerison, P.Eng., FEC
 John Masich, P.Eng.
 Deb Rolfes

Staff Advisor

Chris Wimmer, P.Eng., FEC

Staff

Bob McDonald, P.Eng., FEC, FGC (Hon.), LL.B.
 Executive Director and Registrar
 Kate MacLachlan, P.Geo., FEC (Hon.)
 Director of Academic Review
 Tina Maki, P.Eng., FEC, FGC (Hon.)
 Director of Registration
 Chris Wimmer, P.Eng., FEC
 Director of Professional Standards
 Shawna Argue, MBA, P.Eng., FEC, FCSSE, FGC(Hon.)
 Director of Education and Compliance
 Barbara Miller, FEC (Hon.), FGC (Hon.)
 Director of Finance and Operations
 Candice Armstrong - Administrative Assistant
 Jolene Arthur - Compliance Coordinator
 Erin Beare - Academic Review Assistant
 Alex Chabun - Registration Assistant
 Sharon Evaniew - Executive Assistant
 Angela Foster - Senior Administrative Assistant
 Patti Haus - Registration Coordinator
 Natasha Kabatoff - Administrative Assistant
 Karli Landry - Administrative Assistant
 Carla van Heerden - Academic Review Assistant
 Fan Yang - Administrative Assistant

Editorial provided by:

Martin Charlton Communications
 #300 - 1914 Hamilton Street, Regina, Saskatchewan S4P 3N6
 T: 306.584-1000, F: 306.584-5111, E: marylynn@martincharlton.ca

Editor:

Lyle Hewitt, Managing Director, Martin Charlton Communications
 E: lyle@martincharlton.ca

Design and Layout:

Jo Anne Lauder Publishing & Design, T: 306.522-8461, E: joanne.lauder@sasktel.net

Opinions expressed in signed contributions are those of the individual authors only, and the Association accepts no responsibility for them. The Association reserves the right to make the usual editorial changes in manuscripts accepted for publication, including such revisions as are necessary to ensure correctness of grammar and spelling. The Association also reserves the right to refuse or withdraw acceptance from or delay publication of any manuscript. SSN 0841-6427

Submissions to:

The Professional Edge Editorial Committee
 300 - 4581 Parliament Avenue, Regina SK S4W 0G3
 T: 306.525.9547 F: 306.525.0851 Toll Free: 800.500.9547
 E: apeggs@apeggs.ca

Material is Copyright. Articles appearing in *The Professional Edge* may be reprinted, provided the following credit is given: Reprinted from *The Professional Edge* - Association of Professional Engineers and Geoscientists of Saskatchewan, (issue no.), (year).

POSTMASTER

Return undeliverable copies to: *The Professional Edge*,
 APEGGS, #300 - 4581 Parliament Avenue, Regina SK S4W 0G3

Advertising in *The Professional Edge*

It pays to advertise in *The Professional Edge*. You reach 5,000 P.Engs, P.Geos, Engineers-in-Training and Geoscientists-in-Training in Saskatchewan and 5,000 others outside Saskatchewan.

Advertising Rates and Mechanical Requirements

Advertising Rate, per dimensions (width x height) insertion. Colour as published. Film or electronic files. Electronic art must be at least 300 dpi in a JPEG, TIFF or EPS format.

COVERS		1x	3x	6x
Outside Back:	\$1,500	\$1,500	\$1,250	\$1,100
Inside Front/Back:	\$1,200	\$1,200	\$1,000	\$900

PAGES		1x	3x	6x
Full page	8 x 10 ^{1/2}	\$1,000	\$900	\$825
2/3 page	5 ^{1/4} x 10 ^{1/2}	\$800	\$700	\$625
2/3 page	8 x 7	\$800	\$700	\$625
1/2 page	8 x 5	\$700	\$600	\$525
1/3 page	2 ^{1/2} x 10 ^{1/2}	\$600	\$525	\$450
1/3 page	5 x 5	\$600	\$525	\$450
1/3 page	8 x 3 ^{1/2}	\$600	\$525	\$450
1/6 page	2 ^{1/2} x 5	\$300	\$275	\$250
Bus. Card	3 ^{1/2} x 2	\$150	\$125	\$100

* Applicable GST/HST will be added to advertising rates.

Submission Deadlines

SEPTEMBER/OCTOBER 2016: September 1, 2016 NOVEMBER/DECEMBER 2016: November 1, 2016

Subscription Rates*

Members and Licensees - Free. Others in Saskatchewan - \$12/year. Elsewhere - \$20/year.

Table of Contents

ISSUE 163
JULY/AUGUST 2016

05 President's Message

16 Member Profile

18 APEGS View

19 Council Notes

20 McDonald sees bright future

23 Reporting CPD Activities

24 ACEC - SK

26 Sustainable Water
Management and Agriculture
in Saskatchewan

28 News Beyond Our Borders

29 Tech Corner

30 News From The Field

36 Calendar Of Events



7 My New Home - Saskatchewan

BRINGING NEW PERSPECTIVES -
Behrooz Razban

FREEDOM AND A BETTER FUTURE -
Farzod Darzi

FRIENDLY BUSINESS ENVIRONMENT -
Louis Fourie

OPPORTUNITIES TO BUILD MINES -
Megan Frederick

12 Support for Newcomers -

Many services available in Saskatchewan

14 Guiding Newcomers -

The APEGS application process



President's Message



Tara Zyrmia, P.Eng., FEC

It has definitely been a busy and illuminating first couple of months!

A scant few days after our own exciting Annual Meeting weekend, I was off to Yellowknife for the NAPEG Annual General Meeting. NAPEG is a small organization but really knows how to put on an event. In addition to a full-day PIEVC training course, their extremely well-attended two-day “Concept to Reality and Beyond” professional development conference gave me a new appreciation for the challenges and exciting projects in the Northwest Territories and Nunavut.

A couple of weeks later I was in Charlottetown for the Engineers Canada Annual Meeting, where the open forum, presidents meeting, board meeting and meeting of members provided opportunities for formal and informal dialogue concerning the top current issues for engineers in Canada. It was fascinating to hear the successes and challenges from all of the other regulatory jurisdictions and discuss how we can all work together for the benefit of the profession.

Shortly after returning from the Maritimes, I was off to Calgary for the Annual General Meeting of Geoscientists Canada. This was a great opportunity to get a closer look at the work being done to support the sustainability and regulation of geoscience across the country. We did note that there are many areas where the dual associations (seven of the nine member associations) could improve the support of their geoscience members, both present and potential. The closing dinner presentation by retired geoscientist Gary Smith, Ph.D., P.Geo. titled Climate Change – Fact & Fiction gave a remarkable view of this controversial topic from a geological point of view.

Through all of these travels there was still work to be done here at home. I was very pleased to participate in the rigorous selection and on-boarding process for our new executive director. I am confident that Bob McDonald P.Eng., MBA, LL.B., FEC, FGC (Hon.), FCSSE will do an admirable job keeping APEGS as a respected leader in Canada. We also held our annual council orientation and strategic planning sessions in Moose Jaw near the end of June, where we welcomed two new councillors and had representatives from all of our committees join us to provide their input into the direction of the Association for the next year.

One of the key priorities discussed at these events is the efficient registration of increasing numbers of internationally educated graduates. It is embodied in the mandate of APEGS to ensure that people that are practising our professions are qualified, but also that people that are qualified can get licensed to practise. Our shrinking world means that more and more talented and qualified people are coming to Canada hoping to contribute their skills and knowledge here, and it is in all of our best interests to register these people as efficiently as possible, at the same time meeting our primary objective of protecting the public. I have had the extreme pleasure to work with many professionals from outside of Canada over the



President Zrymiak and her mother Doreen Wilson (left) enjoy a lobster dinner with Wendy and Dennis Paddock at the Engineers PEI annual meeting.

course of my career, and I am always awed and amazed at their vision and dreams. The fortitude they display when they leave their homes to start a new life here, where they must face challenges not only in technical areas but also in language and culture, is truly admirable.

APEGS has undertaken many activities already to help foreign-trained professionals practise in Saskatchewan. The International Graduates Subcommittee of our Equity and Diversity Committee recently started a partnership with the Open Door Society, and opened communications with the Saskatchewan Intercultural Association (SIA), with whom they jointly hosted an information session for internationally educated graduates. I was pleased to contribute to this well-attended event with a presentation on resumé writing, interviews and networking – there were a lot of intriguing questions and the event will likely be repeated in the future. The subcommittee has also offered to provide presentations regarding APEGS and the professions to clients of both SIA and the Open Door Society. Another initiative involves evaluating the implementation of ethnic chapters like those in our sister association in Manitoba, where the Indian Chapter, Filipino Chapter and Chinese Chapter are providing support and

information both separately and together to help foreign-trained professionals prosper in Canada.

The Academic Review Committee has also made substantial improvements to their processes to facilitate the registration of applicants trained outside of Canada. The committee is using expert consultants to review applications and is reviewing and updating policies as required to ensure that learnings from one review can be used to shorten the review time for future applicants from the same educational institution. They are also evaluating procedures used in other provinces to handle cases where applicants cannot present official transcripts due to adverse conditions in their home country. In addition, APEGS has representation on national committees working to develop policies on international mobility, mutual recognition agreements and national data registries and reference material for newcomers.

All of these activities mean more staff and volunteer time, but it is worth the effort to enhance the performance of our professions and make life better for all of us.



My New Home – Saskatchewan

In Canada, everyone comes from somewhere. Whether they crossed the Bering Strait by foot or the Atlantic Ocean in an airplane, all Canadian families at one point or another viewed this frozen land with the fresh eyes of a newcomer.

APEGS has always been proud to welcome and assist new Canadians who have come seeking opportunities in the professions. In this issue, we take an in-depth look at the experiences of foreign-trained professionals as well as the services that are in place to support them.

Behrooz Razban



Behrooz Razban likes the visible change he creates through his work as a Professional Engineer.

"It's rewarding to see something you're involved with being used, and people enjoying it," he says.

He currently works as a senior project manager for the Ministry of Highways and Infrastructure, managing consultants and contractors.

Razban has been living in Saskatchewan for 10 years. Further schooling brought him from his home country of Iran to Canada. He completed a bachelor's degree in civil engineering at the University of Tabriz, and then came to the University of Regina for a master's degree in environmental engineering.

He applied to 10 universities, and the U of R was the first to respond. Eventually he received seven acceptance letters, but by the time the rest of the letters came in, he had already started at the U of R.

"It was May; the weather was great; I liked the city. So when I got more admissions, I thought, I like it here. I don't need to make a change."

During university he met his future wife, an international student from Japan. They both found work in Saskatchewan, and have made their home here.

When it came time to apply to become an APEGS member, his application went smoothly. The Association recognized his university right away, and they were happy with the work experience he'd had in Iran. He's been volunteering with APEGS for several years now, and is currently working on the Experience Review Committee – the same committee that reviewed his work experience when he applied.

He credits part of his success applying for membership and finding work in his field to attending a 10-week APEGS workshop, called "Working as an engineer in Saskatchewan."

"Through that workshop, I got to know Bob McDonald, and I did use Bob for my reference when I was applying for jobs, and I think that helped as a part of increasing your network."

While building his professional network had been a challenge, now that he's established, he appreciates his international education and experience, which allows him to bring a new perspective to his workplace.

"The experience for sure helps because it's quite different. The construction practice is different, contracts are quite different – they're set out differently – and the contractor selections are quite different. There are a number of aspects that are quite different and that sometimes helps me in providing some ideas at work."



Farzod Darzi

When Farzod Darzi came to Saskatchewan from Iran five years ago, he joined family already here: His aunt Zahra Darzi, P.Eng., a professional senior engineer and active APEGS member.

"She's an extremely positive person," Darzi says. "I don't know where I would be without her. If I have a bad day, I talk to her, and she completely changes my mood."

A second-year industrial engineering student in Iran, he continued his major when he came to Saskatchewan, graduating successfully this June from the University of Regina. He's still looking for a job in his field, but he is also interested in starting his own business, preferably in the renewable energy sector.

Darzi says he faced many challenges coming to a new country and figuring out how to migrate his education to his new school. He was able to transfer only 18 of the 76 credits he'd earned

because some of his grades were lower than 80 per cent, and because his books weren't in English.

He saw challenges with the connections between the international and local students.

"In our fourth year of school, you'd basically see the class of international students sitting with each other... and the Canadians, born and raised in Canada, completely separate. They don't blend easily."

That said, he says he had many opportunities to get involved with student life at the U of R, including practicing English, salsa dancing, playing soccer, donating blood and attending music concerts. The school also introduced him to Engineers Without Borders (EWB).

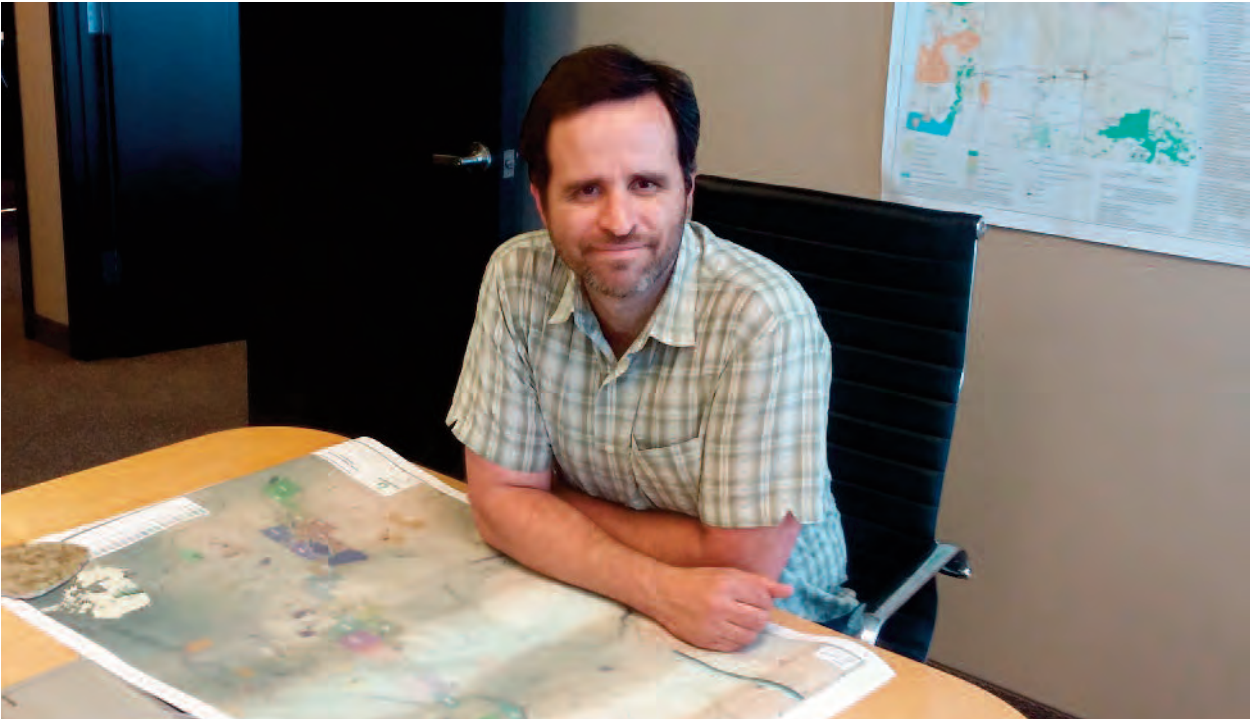
"Learning about Engineers Without Borders and their vision gave me lots of hope for the future. EWB does meaningful projects that would change the world and make it a better place. I got educated about fair trade, leadership, agriculture, microfinance and many other things."

No matter the challenges he faced, he's glad to be here. He describes the situation in his home country as "pretty complicated".

"It has extreme oppression that forces people to leave. That's the saddest thing to say about a country where all the top universities are all free. A person goes to university... and they leave the country at the time when they could do something to make a change."

He first thought about coming to Canada when he was 14, and several years later his family finally agreed he should go, but it still took about five years of applications and processing to arrive as a permanent resident.

"I came for a better future. For more opportunities, for freedom: social freedom, political freedom. You can speak your mind.... I became a citizen this year, and it was my first time being involved with politics openly. It was a great experience."



Louis Fourie

Louis Fourie says he has “a bit of a knack” for making connections.

“When I sit at an airport, I talk to the person next to me,” says Fourie, a Professional Geoscientist and the owner of Terra Modelling Services, an earth science consulting company catering to the exploration and mining industries. “If you constantly talk to people, you quickly find out somebody knows somebody who knows you already.”

When he brought his family to Saskatchewan from South Africa in early 2007, he didn’t find networking to be a challenge — not only because he’s a social butterfly, but also because mining is an international industry, and he already had Canadian contacts.

“Mining is very much an international affair, so you tend to work with people from all over the world all the time.”

Working at De Beers, his co-workers included Germans, Portuguese, Americans, Russians, French, Belgians and more; and although his company, Terra, is based out of Dalmeny, Sask., his client base reaches

far beyond this province, to South America, Spain and Zambia.

Getting accredited as a geologist was a bit more complicated: The review committee had to see the course content from his degree, which he completed in 1995. Luckily he had connections at his alma mater who could help out.

“It’s a bit time consuming, but it’s worth it. The ethics people are very understanding and helpful, and it’s all for a really good cause — you need people properly qualified . . . the P.Eng and P.Geo titles should stand for something.”

He says immigrating was also financially challenging: When you first arrive in a new country, you have no credit record, and you must build it up from scratch.

“What helps is that you completely commit yourself; you tell yourself this is where you are now and you don’t stand with one foot in each country.”

He overcame that financial hurdle and was able to start his own business two years ago after he lost his previous employer. He credits his success to Saskatchewan’s friendly small-business laws and low cost of living — especially compared to places like Vancouver.

“It’s not easy to be in mining and exploration currently, so I’m really ecstatic that I’ve been able to survive for two years in a difficult market. A lot of that can be credited to a business environment that’s friendly to small businesses and consultants.”



Megan Frederick

Megan Frederick came to Saskatchewan from the States in 2008 on a work permit; now she's a Canadian citizen.

"It's fluid between the countries, which is nice to have," she says. "I think it strengthens both countries."

A Professional Geoscientist, Frederick is the manager of geology at K+S Potash Canada. Contract job opportunities brought her to Canada in 2008 during the potash boom. She joined Cameco in 2011 to work on their Cigar Lake project, and she started at K+S in 2013. Her department is working on the Legacy Mine Project, which will be in production by the end of the year.

"There are a lot of details involved designing caverns, creating utilization plans, creating our mine plan, updating resources and reserves and general oversight of the team . . . Any time you're trying to develop a mine, there are logistics issues."

K+S is a German company, and has brought over many Germans to work with their Canadian teams, bringing cultural differences into the workplace. K+S also has mines in the US and South America.

"We have a lot of knowledge that we pull from

throughout the world," she says. "We have a large international group with different experience, different languages, different working styles. It's a nice melting pot . . . Because it brings a different cultural element, we all see the problem differently. We're developing a mine, but we come at it from different angles. That comes from where we grew up, how we studied, what we studied and where we studied."

Originally from Boston, Frederick did her schooling in Pennsylvania and Utah. She currently lives in Saskatoon, but she has also lived in Prince Albert and La Ronge. Thanks in part to the shared language between the US and Canada, she says she didn't have any issues or challenges getting accredited or settled in Saskatchewan.

"There wasn't a language barrier, which was very helpful. I worked in Mongolia before and the language barrier is the biggest issue you have to get over."

She did have to learn to live with the variable weather here: "The winters in Saskatchewan can be very difficult and long sometimes. However, the people make up for the winters with kindness and enthusiasm. As a geologist and resource developer, I couldn't be in a better place for the opportunities to build mines. And it's a very friendly place for economic development for mining, and our professions are held in high regard, which is very nice."

Support for Newcomers:

Many services available in Saskatchewan



The amount of work that needs to be done to establish yourself in a new country can be staggering. Thankfully for those who decide to move to Saskatchewan, there are many resources available to help. The Regina Open Door Society (RODS), the Saskatoon Open Door Society (SODS), and the Saskatchewan Intercultural Association all offer services to newcomers to help them get settled.

Even so, finding employment in your field when you're part of a regulated profession can be difficult, says Ashraf Mirmontahai with the Saskatoon Open Door Society.

"In Saskatchewan and Saskatoon, professional careers exist, however, most of them are regulated, hence require certification and licensure, which makes the process of obtaining employment challenging," Mirmontahai says.

Engineers or geoscientists new to Canada may have an extra hurdle in front of them compared to some other newcomers, but they will still find the help they need through these types of services.

Getting credential assessment

Because having their credentials assessed can take a long time, starting that process is one of the first steps newcomers should take.

Both RODS and SODS offer help with credential assessment, RODS through a partnership with World Education Services (a credential evaluation service), and SODS through their Individual Career Management Program, which provides guidance with

credential recognition.

To access the SODS program, clients must be an immigrant or refugee, eligible to work in Canada, have experience in their field, be unemployed or underemployed and possess certifications from recognized institutions outside Canada.

Both societies also provide support simply by being available to answer questions. They help hundreds of newcomers each year navigate Saskatchewan's organizational systems, so they have the experience and resources needed to find answers.

"We talk about the road map, how things are done here," says Pranika Shrestha with RODS.

Shrestha says that some newcomers have done their homework while others have not, but either way RODS is happy to help those who are feeling lost about the process.

Additionally, both societies provide financial support for the application process if funding is available, and both have worked with APEGS to provide information to their clients, including through promoting APEGS-hosted information sessions about application and licensing.



Making connections

Getting accreditation doesn't guarantee you'll get a job. While most businesses have fair hiring practices, no matter what industry you work in, sometimes landing a position has more to do with who you know than what you know.

The Saskatchewan Intercultural Association (SIA) has a mentorship program that is of particular interest to newcomers looking to establish themselves in Saskatchewan's professional communities.

The program consists of eight weeks of in-class employment and skills training, followed by an eight- to 12-week volunteer internship with a business or organization that directly relates to prior educational and professional experience.

Intake is offered in February, May and September, and each class has 15 spots available, which are divided between various types of professionals from different parts of the world, says Ben Bodnaryk with SIA.

"So far in 2016, we have served clients with professional backgrounds in engineering, medicine, accounting, statistics, business administration, human resources, education, international relations, computer science, medical laboratory science, environmental management and community development," he says.

"Our first 30 clients of 2016 have represented 14 different countries including Nigeria, China, Brazil, Benin, Sudan, Cuba, India, South Korea, Pakistan, Bangladesh, Ivory Coast, Ghana, Vietnam and Morocco."

Bodnaryk says the program allows newcomers to learn more about the Canadian labour market, network with people in their field and gain Canadian experience in their area of expertise.

During the program's last five years, 70 per cent of the participants were able to secure stable employment.

Finding work

The last piece to getting settled in a new place is finding that steady work you need.

RODS helps newcomers put together resumés and network with professionals in their field and supports them in their job search.

Because this piece of the immigration process can be so difficult, SODS has developed a tool called "Alternative Careers for Internationally Educated Professionals" to support them in the search for employment.

"As an internationally trained professional, they have some transferable skills which they could use to explore alternative careers that will allow them to acquire essential skills, gain Canadian work experience, learn new terminology and build professional networks while going through the licensing process," Mirmontahai says.

Professional careers that this tool supports include architecture, biotechnology, chemical engineering, electrical engineering, mechanical engineering, financial services and accounting, geoscience, horticulture, information technology, nursing, medicine and education.

In addition to these career-orientated services, the Regina Open Door Society, the Saskatoon Open Door Society and the Saskatchewan Intercultural Association offer a host of other social services, from language training to settlement services to cultural celebrations. Newcomers to Saskatchewan have the support they need if they reach out.

Guiding Newcomers: The APEGS application process

Moving to a new country comes with a host of challenges, from financial to social to professional: Building a credit rating, creating new friendships and connections, networking, finding work in your field and, if you want to work as a professional engineer or geoscientist, getting the accreditation you need to do so.



Kate MacLachlan, P.Geo., APEGS director of academic review, admits that getting that accreditation can be a complex and lengthy process.

“It depends so much on where you’re coming from, and what the details are of your qualifications,” she says.

The first place prospective members are sent is to the APEGS website to get an overview of the process and requirements. While the amount of information there can be overwhelming, the site does have everything needed to start an application.

“Written down, it looks confusing and complicated, but once we have a specific educational situation to deal with, it’s fairly straightforward.”

If the applicants have specific questions about how the process applies to their situation, they’re encouraged to get in touch with APEGS.

That’s only the beginning, though. In the best-case scenario, the applicant will be from a school with a

mutual recognition agreement, so will not need a detailed academic review. Then the application should only take a few months to process, depending on the timing and number of applicants.

But around half the applicants have to go through the detailed academic review process, which may take up to a year. In the worst-case scenario, the review process will reveal gaps in the breadth or depth of their education, requiring them to take additional courses or confirmatory exams.

“They have four years in which to complete those exams. Some people never will, others will get right to it, but there are only two times a year those exams are offered.”

Prospective members can start the process before they move to the country, which is part of the reason why the wait times for the service are so long. MacLachlan says the biggest issue right now is the volume of international applicants they’re getting.

“Our process is struggling, and we’re working at modifying it, but because of mobility across the country you can’t change your process because everybody else across the country has to be okay with that — they have to accept who we accept.”

On the bright side, APEGS does do everything it can to help make the process as straightforward as possible. The information on the website is easily available, staff are happy to answer questions and the Association makes an effort to host presentations on work experience reporting and for internationally trained people going through the academic review process.

“Most of the time the international applicants are pretty overwhelmed by it, and confused, but we do our best to guide them through it.”



Are You Planning a Trip this Summer?

Sign up for your NEW APEGS Travel Insurance Plan Provided by ATI Insurance Brokers

This is an annual plan providing travel health and accident insurance for a full 12 months from the date of purchase.

- \$2 million emergency hospital and medical benefit
- Multiple trips, up to 60 days of travel per trip
- Coverage available to members and their employees up to and including age 69
- This is a family plan. The insurance covers spouses up to and including age 69 and all eligible dependent children.
- No pre-existing health condition clause for individuals under age 65
- Emergency dental treatment
- Evacuation benefit
- No deductibles
- No medical questionnaire
- Guaranteed issue (If you are a member of APEGS and under age 70 you are approved)

APEGS Member Pricing \$99.99

Learn More at: <http://www.apegs.ca/Portal/Pages/travel>

Member Profile



This month *The Professional Edge* chats with Philip Wrubleski, P.Eng., an agricultural and bioresource engineer with the Saskatchewan Association for Resource Recovery Corporation (SARRC), a non-profit used oil and anti-freeze recycling program.

Tell us about your personal and professional background.

I grew up on a family farm near Kuroki. My family included four sisters and my four “gearhead” brothers. I closed the local country school before going to high school in Kelvington. I started studying engineering in 1968 at the U of S but flunked out in 1971. I then went to work for Western Rotothresh, a company that had dreams of manufacturing a combine on the Prairies. Their designs couldn’t compete with newer designs from the big companies so they went bankrupt. The few machines they produced are now museum pieces like the one in Wadena.

I decided to go back to university and succeeded in finally finishing my engineering degree in 1975.

Why did you choose engineering?

I grew up on a farm, the youngest of five boys. We were always experimenting – making our own gunpowder, reassembling washing machine engines, that sort of thing. We had a love affair with fuels and always seemed to be trying to burn the farmyard down. It must have driven our parents crazy.

What was your biggest challenge in college?

My biggest challenge was working at classes instead of terrorizing Agros. I was part of the generation of students that built that tank that shot toilet paper. It actually originally shot grapefruit but that was deemed too dangerous.

I was also heavily involved in student government. My marks suffered so after I took a couple years off I came back with new gusto.

What was your first job after college?

Because of my experience with Western Rotothresh, I got a job managing the grain harvester program at the Prairie Agricultural Machinery Institute in Humboldt.

After that, I got a job with White Farm Equipment in Brantford, Ontario. I helped them go bankrupt too. I then helped out on a military contract with General Motors testing eight-wheeled light armoured vehicles.

Then one day we got a call to come back to Saskatchewan to farm with my father-in-law near Kindersley. During the first harvest together, the auger we were pulling hit a high voltage line. My father-in-law was killed and I had to have my left forearm amputated.

My career took a dramatically different direction after that. For a while, I farmed and managed the local workshop for mentally challenged adults. In 1991, I went to work for the research department of SARCAN, looking for ways to recycle and market all these products they were collecting.

That’s how I got involved in oil and anti-freeze recycling. Hired by the new board of SARRC in 1997, I’ve been working with them ever since. It’s a great job that requires skills in engineering, finance, political lobbying and management.

What do you feel was your single greatest accomplishment as an engineer?

I would have to say the work I’m doing right now. Managing a successful recycling program is a challenging and satisfying task. There are so many aspects of the job that would be hard to do without a solid engineering background.

What are your interests outside of work?

I help out when I can with the family business. My wife and our two children operate two OPA! restaurant franchises in Saskatoon.

We are also rabid Rider fans and season ticket holders. My son and I enjoy dressing up as Rider-themed Star Wars storm troopers when we go to games.

We are also big rock music fans. I've accumulated a huge library of 1960s rock and my wife and I go to a lot of concerts.

My "gearhead" brothers and I are muscle car fans. We like to go to car shows and we keep each other updated on car industry news and developments.

I took up golf to keep up with my wife. It's a little tough with just the one arm but I manage not to embarrass myself. We have a motorhome and we have a goal of travelling the four quadrants of North America.

Have you ever met anyone famous?

Quite a few! I've met Stephen Harper, Brad Wall, Ron Lancaster, George Reed, Darian Durant. My son and I are also big Hab fans. Once when we were out in Montreal, a recycling industry associate of mine got us into the alumni room where we met Jean Perron, Jean Béliveau and Henri Richard. The next day, we went out to Guy Lafleur's restaurant and got to chat with him.

If you could have any superpower, what would it be and why?

That's easy – I would love to fly like superman and be able to boogie around the world as I please.

Who has had the greatest influence on your life and career?

My parents, of course, although I lost my dad when I was 16. Overall, I would have to say my wife, Mary. She is an educator who has been an amazing leader on family and church matters.

Professionally, I would say my four brothers. One is an agricultural engineer, one is a chemical engineer, another is a mechanical engineering technologist and the last is an electrical engineering technologist – so we pretty much have the whole engineering gamut covered. We stay constantly in touch and correspond with each other on technical and world issues. Whenever one of us is facing a technical problem, we put our heads together to figure things out. They continue to be an inspiration to me.



Phil and son Andrew with Guy Lafleur



Clone Riders 2009 Grey Cup Calgary with Premier Wall



Clone Riders 2013 Grey Cup Regina

APEGS View

ENGSCAPE Is Here!

On June 23, Engineers Canada launched EngScape, a new interactive online portal that will be a valuable resource in addressing the labour market needs of the engineering profession in Canada.

From sparking someone's first love of engineering, to helping students decide which discipline is right for them, to giving new and experienced engineers the tools to find the next destination on their engineering journey, to presenting the range of engineering career options for newcomers to Canada, EngScape has something for everyone.

EngScape has information for a variety of audiences: youth can discover what they can do with an engineering career; recent engineering graduates can look for their first job; experienced engineers can find their next job; and internationally trained engineers looking to enter the Canadian workforce can explore the range of opportunities across the country.

EngScape is a valuable tool for anyone looking for information about engineering, or attempting to navigate the world of careers in this field. With statistics and data about employment rates, salary, post-secondary enrolment and diversity, EngScape presents this information in an accessible and easy-to-understand way and breaks it down by engineering discipline and by province. EngScape also profiles individual engineers, provides typical job descriptions and requirements, and a career outlook for each discipline to give visitors a true sense of the engineering profession. Additionally, the site compiles engineering job postings from a variety of online sources, providing one stop shopping for anyone looking for jobs in the sector, from coast to coast to coast.

For more information, refer to Engineers Canada's news release or visit engscape.engineerscanada.ca

APEGS kicks off 30 by 30 Initiative

BY SHAWNA L. ARGUE, P.ENG., MBA, FEC, FCSSE, FGC(HON), APEGS DIRECTOR OF EDUCATION AND COMPLIANCE



Standing (l to r): Barbara McKinnon (Ministry of Education), Ben Freitag (EYES), Aaron Phoenix, Ph.D., P.Eng., FEC (U of S), Catherine Griffith, P.Eng. (Connection & Involvement), Greg Godwin, P.Eng. (Student Development), Dena McMartin, Ph.D., P.Eng., FEC (APEGS representative on the Engineers Canada Sustainable Professions Committee).

Seated (l to r): Denise Stilling, Ph.D., P.Eng. (U of R), Margaret Anne Hodges, P.Eng., FEC (Chair), Dawn Friessen, P.Eng. (Equity and Diversity, Women of APEGS Sub-committee Chair), and Shawna Argue, P.Eng., MBA, FEC, FCSSE, FGC (Hon) (staff support).

Absent: Adeline Chiu, P.Eng. (K-12), Pat Faulconbridge (Status of Women Office) and Rob Stables, P.Eng., FEC (Council Liaison).

At the May 2015 APEGS Annual Meeting, the membership passed a motion for APEGS to endorse Engineers Canada's "30 by 30" initiative. APEGS joined the other provincial engineering regulators in signing on to this initiative. The 30 by 30 goal is Engineers Canada's commitment to raising the percentage of newly licensed engineers that are women to 30 per cent by the year 2030.

Earlier this year, APEGS Council appointed a task group to lead this endeavour on APEGS' behalf. Chaired by Past President Margaret Anne Hodges, P.Eng., FEC, the task group is made up of representatives from affected APEGS committees, the universities and other industry representatives. The task group held its kickoff meeting on May 27 in the APEGS office.

Over the coming months, the task group will be developing strategies to help APEGS meet this goal. This will include public awareness campaigns, outreach to teachers and guidance counsellors and other activities to yet be determined. More information on the 30 by 30 initiative can be found on the Engineers Canada website at: <https://www.engineerscanada.ca/diversity/women-in-engineering>

Council Notes

The APEGS Council met Thursday, June 16, 2016 at the Temple Gardens Mineral Spa in Moose Jaw. Sixteen of 19 councillors were present. In addition to the Council Meeting, the APEGS annual planning session was held on Friday, June 17, 2016. The Chairs and Vice-Chairs of all the APEGS committees were invited to join Council at the planning session. Many were able to attend on Thursday and observe the Council meeting in addition to participating at the planning session on Friday.

Council received the following presentations and information items:

- APEGS external legal counsel delivered a presentation on the fiduciary responsibilities of volunteers in their capacity as councillors and committee members.
- APEGS staff presented additional information on the plans for upgrading the member database system. Council approved funding for the upgrade project.
- Activity updates were provided from the constituent society liaisons and the APEGS Directors to Engineers Canada and Geoscientists Canada.
- Martin Charlton, along with the Phoenix Group, provided a storyboard presentation of the new awareness campaign concept. It is proposed that the next phase of the campaign include a series of explainer videos to raise awareness of the professions.

Council passed motions as follows:

- Council Policy 6.0 was rescinded. The policy required a sitting councillor to resign if they were to seek nomination for an open position on the Executive Committee.
- Approved the engagement of Paradigm Consulting for project management and business analyst services for the APEGS database upgrade project.
- Appointed the following to the APEGS 30 by 30 Task Group: Adeline Chui, P.Eng., Ben Freitag, Dawn Friesen, P.Eng., Greg Godwin, P.Eng., Catherine Griffith, P.Eng., Barbara MacKinnon, Dena McMartin, P.Eng., FEC, Aaron Phoenix, P.Eng., FEC and Denise Stilling, P.Eng.
- Professional Geoscientists registered in the USA who have met the academic requirement for registration with APEGS can have their experience review done through detailed resumé and three references from Professional Geoscientists registered anywhere in Canada or the USA.
- The guideline for PLAR work experience reporting and the reporting form was approved.

- Changes to AR1.0 Academic Review Policy – General were approved.
- Council approved Life Membership for Wen Chen, P.Eng., Robert S. Friesen, P.Eng., Marek J. Kreczmer, P.Eng., P.Geo. and Bruce W. Mackie, P.Geo.
- Changes to policy Reg6.0 – Termination of Applications were adopted.
- Approved revised terms of reference for the Professional Development Committee.
- Approved revisions to the Policy Admin7.0 Library Grants.
- Approved revised terms of reference for the K-12 Committee.
- Appointed Lawrence Dobranski, P.Eng., to the Investigation Committee for a three-year term.
- Robert McDonald, P.Eng., MBA, LL.B., FEC, FGC (Hon.), FCSSE, Executive Director and Registrar, was approved as the signatory of the RBC Dominion Securities Investment Account and was authorized to complete forms and make investments in accordance with the APEGS investment policy.
- Robert McDonald, P.Eng., MBA, LL.B., FEC, FGC (Hon.), FCSSE, executive director and registrar, was bonded in an amount as recommended to the Audit Committee following referral to the auditor.
- Approved changes to Regulatory Bylaw Section 9.

Council noted and received the following reports:

- The minutes of the April 7 – 8, 2016 Council meeting.
- The Registrar's Reports for March and April 2016.
- Compliance statistics for April and May 2016.
- The unaudited financial statements for March and April 2016.
- The remaining minutes of the May 30, 2016 Executive Committee meeting.
- The remaining minutes of the May 30, 2016 Governance Board meeting.
- Vice-Chair appointments as follows: Image and Identity Board - Brett LaRoche, P.Eng.; Connection and Involvement Committee - Catherine Griffith, P.Eng.; Professional Edge Committee - John Styles, P.Eng., FEC; Communications and Public Relations Committee - Diana Podborochynski, P.Eng.
- The remaining minutes of the May 25, 2016 Image and Identity Board meeting.
- The remaining minutes of the May 24, 2016 Education Board meeting.
- The abridged minutes of the May 7, 2016 Investigation Committee meeting.

APEGS' McDonald sees bright future for engineers and geoscientists in Saskatchewan

BY BRUCE JOHNSTONE, BUSINESS EDITOR, LEADER-POST

Reprinted with permission



If there's such a thing as being over-qualified for a job, Bob McDonald, the new executive director and registrar of the Association of Professional Engineers and Geoscientists of Saskatchewan, just might be it.

Not only is McDonald a Professional Engineer, but he's also a lawyer, has his MBA, taught at university for 25 years, and he's working on his master's degree in history. Plus, he has 17 years experience with APEGS, most recently as deputy registrar.

As it turns out, McDonald is able to use virtually all of that education, experience and skills in his new job.

McDonald, who takes over from Dennis Paddock, who retired this spring after 23 years at APEGS, spoke recently with the Regina *Leader-Post* on his new role with APEGS and the important role engineers and geoscientists play in our economy.

The following are excerpts from that interview, which has been edited and condensed.

Q: With your training and experience in business, law, engineering and teaching, would you say you were a natural fit for the job as executive director of APEGS?

A: I was pretty excited to be selected as the (top) candidate for this position. Professional regulation has evolved. You think of privacy legislation, human rights legislation, fairness commissioners in some provinces. You have to look at other provinces and say: "How can we improve our processes?" You've got the onus to make sure that everybody that you issue a licence to is qualified. But you have an equal obligation to make sure that people who are qualified get licensed. That becomes more difficult with international engineering and geoscience graduates.

Q: Anecdotally, we hear about foreign graduates with engineering degrees driving cabs and doing other service industry jobs. Is that because they're not qualified to work here or the accreditation process is too rigid?

A: We have an accreditation process in Canada that's fairly robust and engineering education in Canada is very strong. There are a lot of universities around the world that we don't know much about and that creates some difficulty in dealing with internationally educated graduates. Is it an engineering degree or a science degree? Is it a technology degree or an engineering degree? You have to look at various approaches to assess those qualifications. (Some say), let's have everybody write an exam. But to a mid-career or late-career professional coming to Canada, is that a fair assessment of that person's qualifications? To have a person write six or eight or 10 or 12 exams, it does make it a difficult process, particularly when (the exam) is in a second or third language. If you get into this underemployment situation, it affects one's self-esteem. You also get skill atrophy because you're not allowed to use your skills. Then your family is living below the standard of living they should be living at based on their qualifications. There's a cost to the country of not having these people fully employed.

Q: Engineers and geoscientists are often seen as a litmus test of the economy. With the recent economic slowdown, are you seeing fewer engineers working in the province?

A: We've seen a slowdown in the growth (of the profession). Our numbers are fairly equivalent to what we were in 2015. We started to notice an increase in applications in 2004. So you saw, in 2004, 2005 and 2006, the beginning of the boom. Economists should look at (engineering) association membership and applications as a leading indicator, particularly in a resource-based economy. There's a lot of exploration and feasibility studies that go on before you get into the actual construction. We've more than doubled since I came here in 1999 and we've seen this rapid growth. (With the completion of potash expansion projects and low resource prices), our numbers are about the same, but we're not seeing the growth.

Q: It used to be the case that engineering and geoscience graduates had to leave the province to find work. How much has that changed in the past 10 or 15 years?

A: We used to have about 600 members-in-training in 2001-02. These were largely recent graduates of the University of Saskatchewan and the University of Regina. A lot of our engineering graduates would leave the province and go elsewhere. (Since then) opportunities arose to have careers in Saskatchewan. We're at about 1,600 members-in-training."

Q: Is that a function of the growth of the economy or the growth of the profession?

A: We've had, for the last 10 or 12 years, the opportunity for these people to stay home. They're the future of our province and the future of our profession of engineering and geoscience.

"I was pretty excited to be selected as the (top) candidate for the position."



A P E G S

Association of Professional Engineers
& Geoscientists of Saskatchewan

APEGGS Names New Executive Director



Robert (Bob) McDonald, P.Eng.,
MBA, LL.B., FEC, FGC (Hon.), FCSSE

Tara Zrymiak, P.Eng., FEC, President of the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGGS) today announced that Robert (Bob) McDonald, P.Eng., MBA, LL.B., FEC, FGC (Hon.), FCSSE has accepted the position as the association's Executive Director and Registrar.

McDonald replaces Dennis Paddock, who retired this spring after 23 years in the role. McDonald himself has served in a number of capacities on the APEGGS staff for the last 17 years, most recently as Deputy Registrar.

"We are excited about having Bob take over this new role. We feel that APEGGS will continue to prosper and be regarded as a leader in the country under his leadership, due to his passion for the association and professions, and the depth and breadth of his knowledge, network, and skill sets," said Zrymiak.

McDonald, who holds degrees in chemical engineering, business and law, worked for nine years at the Griffin Toews Maddigan law firm before joining APEGGS.

"I am pleased to have this opportunity to help guide the future of the professions in Saskatchewan. Now more than ever, engineering and geoscience hold the keys to the public safety and prosperity of Saskatchewan as a province. It is an honour for me to be given this responsibility," said McDonald.

"I would also like to pay tribute to my predecessor, Dennis Paddock. He was a great mentor to me and a remarkable leader for our association. He leaves APEGGS in a great position and it will be my responsibility to build on his success," said McDonald.

Save the Dates!

APEGS Fall Professional Development Days are set - November 3 & 4, 2016 in Regina

Below is the preliminary program.

TIME	Thursday, November 3, 2016 REGISTRATION		Friday, November 4, 2016 REGISTRATION	
	TRACK 1	TRACK 2	TRACK 1	TRACK 2
8:30-12:00	Bold Strengths of Safety Leadership - Posniak Safety Associates	Time Management - Achieve Training Centre	P5™ Impact Analysis - Enviro Integration Strategies Workshop	Geoscientists Canada – QP Short Course on 43-101 and 51-101
12:00 - 1:00	Luncheon Speaker: Strategic Branding - Bradbury Branding & Design		Lunch	
1:00 - 4:30	Invasive Aquatic Species - Ministry of Environment	Conflict Resolution – Achieve Training Centre	Project Risk Reduction Strategies Workshop – Enviro Integration Strategies	Geoscientists Canada – QP Short Course on 43-101 and 51-101 (Continued)
	Canadian Climate Law for Engineers: Overview of Engineers Canada Training held in June 2016			
	Lifecycle Assessment of GHG from Mining and Milling Uranium in Saskatchewan			

Check the APEGS website and watch your email in September 2016 for registration details.

For further information, contact Shawna Argue, P.Eng., MBA, FEC, FCSSE, FGC(Hon),
APEGS Director of Education and Compliance (sargue@apegs.ca).

Why Reporting CPD Activities Matters

SEBASTIAN WALROND P.ENG, CHAIR PROFESSIONAL DEVELOPMENT COMMITTEE

Someone recently asked me, “Why is it important to report your professional development activity credits and what is the value of reporting?”



My answer begins by stating that all members of APEGS, which includes members-in-training, are required under our regulatory bylaws section 20(2): “to keep themselves informed in order to maintain their competence [and] strive to advance the body of knowledge within which they practise.” Thus, there is no debate that members of APEGS must participate in professional development activities.

Why then the urgency behind reporting credits which we are earning anyway? I believe it is a matter of accountability and discipline. As professionals we must hold ourselves accountable, and demonstrate to the powers that be that we are in fact doing what we have obligated ourselves to do. Second, the act of reporting

shows character discipline which exemplifies the fundamentals of diligence and care in the engineering and geoscience professions.

If we look back at the 2015 November-December edition of *The Professional Edge* under the President’s Report, we see that President Margaret Anne Hodges shared her experience on the ease of reporting credits in seven minutes, eight seconds. Our reporting system requires members simply to report the number of credit hours in the various categories for which they have completed activities. Details on activities are tracked in the member’s personal log and are not required as part of the reporting process.

The second part of this excellent question focuses on the value of reporting. Our profession is a self-regulating one and there exists a real risk of government intervention should “just cause” ever be established where we could lose our ability to self-regulate. It would be particularly disheartening if this cause were related to professional development and competence given that such activities are mandatory to begin with. Here lies the fundamental value towards reporting credits in the form of a risk mitigation strategy to protect our Association’s ability to self-regulate, which I believe is important to us all.

The Professional Development Committee has identified as a high priority the education and awareness of the membership around reporting CPD credits. We have embarked on a couple of initiatives to connect and serve our members such as a travelling roadshow and taking opportunities to communicate (e.g. this article) on this subject.

For more information on CPD reporting, refer to the APEGS website at: www.apegs.ca, under Members/Continuing Professional Excellence, or contact Shawna Argue, P.Eng., FEC, FCSSE, FGC(Hon), Director of Education and Compliance in the APEGS office or at sargue@apegs.ca.

Sebastian Walrond, P.Eng., is a member and Chair of the APEGS Professional Development Committee. He is the Managing Director of W4 Projects Services.



Association of Consulting Engineering Companies - SK

AGM and Golf Tournament

June 6, 2016



Letter from new ACEC-SK Chair

Now that the dust has settled on the federal and provincial elections, we are starting to hear details of the various new funding programs that will be available to municipalities. This fall, we will carry the Vote Infrastructure messaging into the municipal election campaigns. Tools developed by our national body are available to ACEC-SK members to assist them in sharing the message of informed investment in infrastructure in discussions with prospective candidates. Our advocacy efforts this year will continue to support the progress made on contract language and procurement of professional services. In addition, we will plan to emphasize the importance of informed infrastructure renewal. Municipalities are best served when resources are properly allocated to planning, allowing them to choose the right projects and appropriate project delivery models rather than chasing funding by scrambling to find, and accelerate design for, “shovel ready” projects.

This year marks the 40th anniversary of ACEC-SK and I am excited to celebrate this monumental achievement. Over the past 40 years, our member firms have been instrumental in supporting progress throughout Saskatchewan. In addition to the impressive technical achievements of our member firms, employees of Saskatchewan consulting engineering companies and their families have contributed significantly to the social and cultural fabric of our province. It is my goal to share the stories of these outstanding contributions using our existing communications tools such as the newsletter, website and social media outlets.

We face the coming year with cautious optimism. Challenges in the economy have created ripple effects across all sectors. Now, more than ever, it is vital that we focus on showcasing the value provided by ACEC-SK member firms. We will continue to educate client groups on the savings achieved in the life cycle of a project when proper planning is followed by selection of a qualified design team who are working under a contract that carries an appropriate level of insurable risk.

Thank you for choosing me to lead the 2016-2017 ACEC-SK Board of Directors. I look forward to the opportunity to work with my fellow directors, ACEC-SK member firms and our industry partners to achieve our common goals.

Regards,

Jeff Halliday, P.Eng.
Chair, ACEC-SK Board of Directors
2016-2017



ASSOCIATION OF CONSULTING
ENGINEERING COMPANIES | SK

Association of Consulting Engineering Companies - SK AGM and Golf Tournament

2016 ACEC-SK Annual Golf Tournament

The June 3, 2016 ACEC-SK annual golf tournament brought our association's membership and industry stakeholders out to Elbow's Harbor Golf Club and Resort for an afternoon of golf and networking. This year the ACEC-SK tournament enjoyed one of the largest turnouts ever. Golfers enjoyed sunshine and breezes during the day's event.

2016 TOURNAMENT WINNERS -

Ground Engineering

Lowest Score: 63



Photo (L to R): Stormy Holmes, P.Eng., FEC, ACEC-SK Past Chair; Tim Adelman, P.Eng.; Tom Williams, P.Eng.; Richard Jankowski; Paul Walsh, P.Eng. and Jeff Halliday, P.Eng, ACEC-SK Chair.

SPONSORS

ACEC-SK would like to acknowledge and thank this year's major golf tournament sponsors for their support. Their generous contributions ensure the continued success of this annual event.

GOLD SPONSORS

APEGS
Clifton Associates Ltd.
Delco Water
Thurber Engineering

SILVER SPONSORS

Inland Pipe
WSP

BRONZE SPONSORS

Engineered Pipe Group
Ground Engineering
KGS Group
McElhanny Consulting Services Ltd.
Prakash Consulting Ltd.
SaskWater

SUPPORTER SPONSORS

ALFA Engineering Ltd.
Catterall & Wright
Wallace Construction Specialties

The ACEC-SK Staff extends thanks to all our volunteers who contributed to the success of this event.



Sustainable Water Management and Agriculture in Saskatchewan

A MESSAGE FROM THE ENVIRONMENT AND SUSTAINABILITY COMMITTEE

BY MONTY RUSSELL, P.ENG.

Opinions expressed do not necessarily reflect the views or policies of APEGS

Worldwide attention to climate change and water consumption has generated a new focus on sustainability in agriculture. Saskatchewan should prepare to promote the value of agriculture in the face of unfounded hypotheses popular in social media.

HYPOTHESIS 1:

The planet is running out of water.

The science of water is clouded by the complexities of water distribution, quality and economics. One hypothesis of the conservation movement is that the planet is running out of water. However, the mass of water on the planet has not changed since man appeared on Earth. The only water that escapes Earth's atmosphere is carried on spacecraft. Water molecules are a product of combustion which may result in a slight increase in the water in the atmosphere.

HYPOTHESIS 2:

The planet is running out of fresh water.

Fresh water includes snow, ice, groundwater, surface

water and polluted water. Any water that is not sea water is fresh water. Civilizations rely on fresh water for consumption, hygiene and agriculture. Population growth consumes more fresh water, pollutes more fresh water and demands agriculture that is more intensive. The combination creates localized fresh water shortages.

In 2010, *National Geographic* published an article entitled "The Hidden Water We Use". The article was loosely based on research by Arjen Hoekstra at the University of Twente, Netherlands and UNESCO scientists who tabulated the amount of fresh water required to produce a variety of products. The article states that 1,857 US gallons of fresh water are required to produce a single pound of beef. Of this incredible volume, over 99 per cent is the water used to grow the animal feed. The article also assessed the water footprints for cereal crops, such as corn at 109 US

gallons per pound. Similar articles would have consumers believe that fresh water conservation requires a future where foods and other products must come from the oceans.

Rainfall on crop land should not be considered fresh water consumption. Crops stabilize the soil, return water to the atmosphere via transpiration and, through photosynthesis, convert carbon dioxide to oxygen. In *The Water Footprint Assessment Manual* Hoekstra et al have divided the water footprint into blue water (surface and ground), green water (rainfall) and grey water (diluted water pollution). This methodology and others like it will assist engineers and geoscientists to consider water management in their projects.

HYPOTHESIS 3:

Climate change is the cause of localized water shortages.

This hypothesis considers possible impacts of climate change on local fresh water resources. Although global warming increases evaporation and rainfall, some areas will be impacted more than others as weather patterns change. Weather data suggests that more extreme weather-related events are occurring every year. Governments and media

respond to flooding in urban areas but rarely acknowledge precipitation events in fields of grain. The agriculture industry requires governments to take action on water resource management in rural areas. And the expertise of engineers and geoscientists will be needed to provide irrigation, drainage and distribution plans that work now and in the future.

CONCLUSION:

The planet depends on agriculture to manage fresh water responsibly.

Populations depend on agriculture to provide necessities of life. The Saskatchewan agriculture industry needs to promote sustainable management of fresh water. For example, US pork producers have developed the Pig Production Environmental Footprint Calculator to promote sustainable water use. Involving engineers and geoscientists to assess agricultural water footprints will improve the sustainability of crop and livestock production in Saskatchewan.

(Monty Russell, P.Eng. is a graduate of agricultural engineering from the University of Saskatchewan. His career has included business development and project management in IT, industrial and municipal projects. Mr. Russell currently works as a senior environmental engineer at KGS Group, managing municipal infrastructure projects. He is an active member of the Environment and Sustainability Committee of APEGS.)



Women in Mining and
Women in Nuclear Saskatchewan Inc.
presents

MINE *your* POTENTIAL

CONFERENCE

September 23, 2016 — Saskatoon Inn, Saskatoon

Choose 4 of 8 breakout sessions:
(subject to change)

**We Are All Advocates • Work Life Balance
Emotional Intelligence • Mining for Talent • Nuclear 101
Milling 101 • Mining 101 • Interpreting Quarterly Reports**

Registration \$250 Students \$100
<http://wimwinsk.com/event/mine-your-potential-2016/>
Early bird \$200 (Ends August 16, 2016)!

WIM/WiN-SK's fourth annual Mine Your Potential Conference provides an excellent personal and professional development opportunity for people involved or interested in the minerals, mining, nuclear, and radiation industries.

Keynote Speaker:
Dr. 'Lyn Anglin, Chief Scientific Officer, Imperial Metals
'Lyn has extensive experience in managing geoscience research and engagement with the public. She guides research activities including the impact of the tailings breach at Mount Polley mine.

**WIM
WiN
SASKATCHEWAN**

News Beyond Our Borders



<http://cdn.theconversation.com>

Antarctic ozone layer starting to heal

CTV News - Antarctica's ozone hole finally is starting to heal, a new study finds.

In a triumph of international co-operation over a man-made environmental problem, research from the United States and the United Kingdom shows that the September-October ozone hole is getting smaller and forming later in the year. And the study in *Science* also shows other indications that the ozone layer is improving after it was being eaten away by chemicals in aerosols and refrigerants. Ozone is a combination of three oxygen atoms; high in the atmosphere, it shields Earth from ultraviolet rays.

The hole has shrunk by about 1.7 million square miles (4.5 million square kilometres) in the key month of September since the year 2000 — a decline of about one-fifth, the study found. That difference is more than six times larger than the state of Texas. It also is taking about 10 days longer to reach its largest size, according to the study.

The hole won't be completely closed until mid-century, but the healing is appearing earlier than scientists expected, said study lead author Susan Solomon of MIT.

"I think it's a tremendous cause for hope" for fixing other environment problems, such as man-made climate change, said Solomon, who led two US Antarctic expeditions to measure the ozone layer in the 1980s and has also been a leader in studying global warming.

OIQ placed under trusteeship

Montreal Gazette - The Quebec government has placed the province's Ordre des ingénieurs du Québec (OIQ) under trusteeship because of an internal crisis in the professional body.

Justice Minister Stéphanie Vallée told reporters on Wednesday that three administrators were named by the government to help the OIQ's board work through its problems.

Infighting and financial difficulties since 2014 have made the Order unable to fulfill its primary responsibility of protecting the public, she said.

The OIQ proposed solutions in a June 10 report, but Vallée said they were "insufficient."

In a statement, the OIQ said: "The Ordre des ingénieurs du Québec is disappointed with this decision, which was made after a year of efforts and results in line with its mission of protecting the public. However, the OIQ respects it."

Vallée added she hopes the trusteeship will help the Order's new president, Kathy Baig, turn the corner.



cbc.ca

New species of dinosaur found in Alberta Badlands

CBC News - A new species of dinosaur is so recently discovered it doesn't even have a name yet — so the fresh specimen from Alberta's Dinosaur Provincial Park is simply known as Hannah, for now.

The species is in the Ceratopsian family — think Cera for those of us who only know dinosaurs from *The Land Before Time* — and it potentially bridges the evolutionary gap between the Centrosaurus and the Styraeosaurus.

In fact, Hannah wouldn't be much different from either of those two previously discovered species, except that its horns show a combination of characteristics from both.

There's still some work to be done, however, to confirm its distinct place in the evolutionary tree. Scott Persons, a paleontologist at the University of Alberta, told the *Calgary Eyeopener* that it is by far the most exciting thing he's ever discovered.

The discovery of the new species was made over the course of days while they extracted the animal's skull last summer.

Tech Corner

In this new regular feature, *The Professional Edge* will highlight news on advances in technology from around the world.



Robotic bees take flight

Electronics360 – Researchers often develop robots that are inspired by nature and biology.

One such project is Harvard University's "RoboBees," which aims to create autonomous robotic insects capable of sustained independent flight.

Robots with these capabilities could one day assist in reconnaissance missions, aid in remote communication and act as artificial pollinators.

The researchers, led by Robert Wood, professor of engineering and applied sciences at Harvard University, have designed sophisticated, tiny robots with features that will soon enable autonomous flying.

"Bees and other social insects provide a fascinating model for engineered systems that can maneuver in unstructured environments, sense their surroundings, communicate and perform complex tasks as a collective full of relatively simple individuals," said Wood.

"The RoboBees project grew out of this inspiration and has developed solutions to numerous fundamental challenges—challenges that are motivated by the small scale of the individual and large scale of the collective."

The team's current RoboBee weighs in at just 84 milligrams, which is about the same size as a real bee.

3-D printing gives cancer patient new jaw

CBC News - A 68-year-old Indiana man who lost part of his face to cancer can now smile again after getting a new 3-D printed jaw from the Indiana University School of Dentistry.

Retired mechanic Shirley Anderson received the prosthesis after a long fight with tongue cancer that dates back to 1997. The radiation therapy eventually caused him to lose his mandible and Adam's apple, which in turn left him without a chin.

Before the 3-D printed jaw, surgeons attempted to reconstruct his mandible using a titanium bar and bone from his fibula, but that didn't work. A prosthesis made of plaster and silicone was also tried but it was uncomfortable and heavy to the point that it would slip down.

That's when Dr. Travis Bellicchi, of the Indiana University School of Dentistry, considered a digital solution. Instead of going through the traditional method of using plaster to get an impression of Anderson's face, he used a digital model obtained through a CT scan. With the help of a student, he was able to design a prosthesis in less time than it would have taken with clay.

The result was a 3-D printed mould that is lighter, breathable and more realistic.



Sweden tests electric highway

CBC News - Sweden is testing a technology that feeds electrical power into trucks as they drive along a highway.

A 2-kilometre test stretch of Highway E16 in Sandviken, about 160 kilometres north of Stockholm, has been equipped with overhead electrical wires that can be used to feed power into trucks that have a hybrid-electric motor.

The power is fed into the truck via a current conductor on the roof of the truck called a pantograph, similar to urban trolley cars.

Once the truck leaves the electrified part of the highway, it returns to diesel-electric mode.

The trial was launched in late June and will continue until 2018.

News From The Field

POWER

SaskPower carbon capture facility operating more reliably

POWER Magazine - Though it experienced a number of problems in its first year of operation, the SaskPower Boundary Dam Unit 3 carbon capture facility is now operating with a reliability rate of over 92 per cent, according to sources at the Crown utility.

After initial excitement about successfully operating the world's first full-scale carbon capture and sequestration (CCS) process at an operating power plant, SaskPower discovered a number of problems with the facility that resulted in numerous repairs and operational changes.

In a blog post dated May 9, Saskatchewan's provincial electric utility reported that the 161-MW (gross) Unit 3 was online 100 per cent in April and that 82 033 metric tons of carbon dioxide (CO₂) had been captured that month.

"This brings the total of CO₂ captured in 2016 to just under 300 000 tonnes, or 75 per cent of what was captured in 2015. We remain on track to meet our target of 800 000 tonnes captured in 2016," the company said.

To date in 2016, SaskPower says Unit 3 "is operating above the 85 per cent reliability target set for all power units at Boundary Dam Power Station. Of the first 121 days of 2016 the CCS system has been up for 112 days, achieving a reliability rate of more than 92 per cent."

SaskPower says the facility is operating "at a level that exceeds federal emission regulations and meets SaskPower's CO₂ sales commitment."



Saskatoon to boost reliance on small-scale clean power projects

Saskatoon StarPhoenix - As SaskPower works to double its use of renewable power sources, the City of Saskatoon plans to expand its use of small-scale sources of clean electricity, which cut emissions and could make the city more self-reliant.

"We've set a target of producing, or generating, 10 per cent of our annual energy requirements from local, renewable resources," said Kevin Hudson, P.Eng., Saskatoon Light and Power's manager of metering and sustainable electricity.

Saskatoon is relatively new to small-scale or distributed generation projects. After almost nine decades without any electricity generation capacity whatsoever, the city opened its \$15 million landfill gas collection and power generation system in 2014.

The plant produces electricity by burning methane and other gases extracted from deep beneath the landfill. It can power up to 1,300 of the roughly 59,000 homes in Saskatoon while cutting greenhouse gas emissions by 45 000 tonnes per year, according to Saskatoon Light and Power.

Hudson said SaskPower's pledge to increase its use of renewable resources to 50 per cent from 25 per cent is an ambitious but achievable goal. Because Saskatoon buys almost all of its power from the utility, residents will benefit from cleaner electricity. At the same time, more small-scale power projects will further cut emissions, he added.

"If you can develop local, renewable energy projects right in the community, or near the community, that benefits (everyone)," he said, noting that clean power generated in Saskatoon could be used directly or sold back to SaskPower, bringing the Crown corporation closer to its target.

Saskatoon is currently contemplating more small-scale projects, Hudson said. In addition to the landfill plant, which produces about 1 per cent of the city's electrical needs, there are plans to partner with the Saskatchewan Environmental Society to build a solar photovoltaic demonstration project, and a proposal to build a hydro power plant at the weir, a project that could power 4,800 homes — roughly 4 per cent of the city.

In 2009, the city commissioned pre-feasibility engineering and environmental baseline studies of several possible design concepts. The studies found that three possible designs were technically feasible and economically viable. Hudson said while the project is in its infancy, it would likely cost about \$60 million and leave space for a whitewater park.

Saskatoon currently uses slightly more than 10 per cent of all electricity consumed in Saskatchewan, of which small-scale power projects like those proposed for the city produce a negligible amount. However, growing demand and SaskPower's push toward renewables mean that could change.

ENVIRONMENT



No quick solution to Quill Lakes flooding

Regina Leader-Post - People living near the Quill Lakes are fed up. The lakes, 150 kilometres north of Regina, have flooded 29,000 acres of farmland and 56,000 acres of pasture land.

Earlier this spring, the road travelling between the lakes was closed — again — due to water levels, creating a lengthy detour.

And no one, residents say, is helping them.

“I don't think (the government is) working very hard at it, myself. I'm getting more upset every year about it,” said farmer Darrel Allen, who has watched more than 500 of his acres wash away.

The lakes have risen 6.5 metres in 10 years. If they rise another metre, their saline contents will spill south to the freshwater Last Mountain Lake.

Last year, the Water Security Agency (WSA) proposed to divert inflow from Kutawagan Creek to Last Mountain Lake, but stakeholders rejected the idea. So the government went back to the drawing board.

“It's still an incredibly difficult situation,” said WSA spokesman Patrick Boyle.

The agency is exploring a handful of other options, such as increasing water storage in the basin, deep-well injection and making the Quill Lakes a priority for the province's new drainage regulations.

Boyle said any solution requires extensive technical and engineering reviews, “so they don't just happen overnight.” The last proposed solution, for instance, took a year to develop. It's hard to say if the WSA will shop around a new solution this year, Boyle said.

That's why, for now, he said Mother Nature — warm weather, wind and evaporation — is probably the lakes' best bet.

But Rural Municipality of Lakeside deputy reeve Kerry Holderness thinks “they're waiting too long, and every time they wait, every rainstorm we get, we lose more.”

The Saskatchewan Crop Insurance Corporation has indicated that they “... aren't going to be covering land that remains flooded for multiple years.”

“What we need is an exit strategy for the people in the Quill Lakes to be able to get out,” Holderness said.

UNIVERSITIES AND RESEARCH

Award for U of S researcher

CBC News - Earlier this year researchers at the University of Saskatchewan showed the world, for the first time, the inside of a horse's stomach.

Now, Khan Wahid, associate professor in the College of Engineering at the U of S, is the proud recipient of the 2016 Innovation Place Industry Liaison Office (ILO) Award of Innovation and \$5,000.

According to a release from the university, Wahid's research showcased the significant innovations in video and image processing through wireless endoscopy capsules



cbc.ca

known as camera pills. They're roughly the size of a large multivitamin. In March, Wahid and his team were able to capture images from the inside of a research horse named Mama.

"Doctors are not satisfied with the current image quality from endoscopy capsules," Wahid said in the release. "We are working to improve the technology in several ways, which will lead to more consistent, accurate diagnosis."

The university said Wahid is now testing his patented technology in animals with collaborators from the Western College of Veterinary Medicine, both as a test bed for human use, and to potentially fill a need for veterinarians. There is no such tool on the market for their needs, according to the university.

The end goal is to have this technology used on humans to help diagnose gastrointestinal disorders or diseases. The tiny camera has been improved to allow images and video to be captured inside a body and sent to the researcher's smart phone in real time.

Students pick up \$50,000 challenge prize

Regina Leader-Post - The world of farming has changed immensely over the past century, and while tractors have become much more advanced, a farmer still needs to sit behind the wheel – for now.

That could change soon, thanks to the robotic tractor created by Sam Dietrich, Joshua Friedrich and Caleb Friedrich, a team of University of Regina students.

Their robotic tractor was the culmination of months of work, which paid off when the team earned the top prize at the 2016 agBOT Challenge in Indiana.

"It is a competition to encourage innovation in agriculture and robotics. The hosts felt there was a void of robotic applications in the agriculture realm," said Joshua Friedrich.

Tasked with planting a dozen half-mile rows of corn, the team competed against 11 other teams from around North America.

"There was so much to do and there were a lot of things that could go wrong," Friedrich said. "It turned out in our favour that the bad things that happened to other teams, happened to us early on and that allowed us to work on the problems beforehand."

The students, who have graduated from the U of R's industrial systems engineering program, plan to enter again next year.

The team's supervising professor, Mehran Mehrandezh, P.Eng., was proud of their work.

"I was very excited about this. We stood first and it was really exciting for us," said Mehrandezh, who introduced the students to the project. "I picked them because they came to me about the possibility of using UAVs. That was the start point, which goes back to August of 2015."

Saskatchewan was well-represented at the competition. Nathan Muchowski, a former U of R student, earned third place for his robot.



content.eluta.ca

Students graduate from U of S as mining engineers

Global News - Three years after introducing a mining engineering program at the University of Saskatchewan (U of S), five of its students graduated last spring. They studied in the university's mining and mineral processing options program.

"It signals a return to mining engineering in Saskatchewan," said Al Shpyth, executive director of the International Minerals Innovation Institute (IMII).

The U of S and IMII partnered to bring the program to life. The option, which is an add-on to degrees in chemical, geological and mechanical engineering, is the first offering of its kind at the U of S since 1976, Shpyth said.

Despite lagging prices and sales for potash and the recent closure of the Rabbit Lake Cameco uranium operation, Shpyth said there are plenty of opportunities for graduates in the province.

"The industry here is still really strong. We've got 10 major operating mines that always have a need for new skills and new talents," he said.

INFRASTRUCTURE



saskatoon.ctvnews.ca

City rejects leaky pipes as cause of road collapse

Saskatoon StarPhoenix - A City of Saskatoon official is dismissing claims by a Saskatchewan Crescent resident who believes the collapsed part of his road is caused by leaky storm sewer drainage pipes.

Jeff Jorgenson, the city's general manager of transportation and utilities, said his department is aware of assertions by Norman Zepp that the crescent-shaped chunk of collapsed road was caused by saturated earth due to leaky pipes.

"We have no reason to believe that is any kind of a significant factor in this," Jorgenson said in an interview.

Zepp lives just west of 17th Street and east of where the current slope failure has left a hole in the roadway. Earlier this month, he showed a *StarPhoenix* reporter and photographer the location of storm sewer drainage pipes along the riverbank.

One pipe is located right below the collapsed road. But Jorgenson said the pipe did not cause the hole, according to studies by city staff and engineering firms hired by the city.

After the riverbank slope failed in 2014, city staff ran a camera from a manhole in the street through the pipe that emerges along the slope near where the Meewasin Valley Trail used to be located, Jorgenson said.

Jorgenson said three parts of the pipe were fractured, but no erosion was detected.

"Our conclusion is that the slide broke the pipe," he said. "It wasn't the pipe that caused the slide."

Jorgenson said the pipes under Saskatchewan Crescent were installed in the late 1920s. They were inspected in 2014 and continued to be inspected "as required," Jorgenson explained.

Even if the pipes were leaking, that would not be enough water to weaken the ground sufficiently to cause the slumping, he added.

The slumping is due to the nature of the soil, the high groundwater level and the severity of the slope, Jorgenson said.

Zepp rejects this explanation.

"This is the fault of the city directly related to civic infrastructure," Zepp said in an interview. "Nothing to do with nature."



twitter.com

Saskatchewan Legislative Building dome unveiled

620 CKRM - After more than two years of construction, the Legislature's dome was revealed in May.

The project included \$21 million worth of restoration.

The shiny, new appearance of the dome is temporary. Over several months, the copper will oxidize, changing to brown and black, returning to its pre-restoration appearance.

While the project is substantially complete, some finishing touches will be made as the approximately 175,000-pound steel scaffolding built around the dome comes down.

"We were honoured to lead this important project," PCL district manager Sean Hamelin said. "Contributing to the restoration of this beautiful, emblematic building is truly special."

The restoration of this historic structure, which began in November 2013, preserved its unique decorative features, including its ornate stone and copper elements.

It was carried out in compliance with the *Standards and Guidelines for the Conservation of Historic Places in Canada* and *The Heritage Property Act*.

The dome reconstruction was a feat of engineering, requiring nearly 450 workers and craftspeople to complete the task.

The Legislative Building's dome suffered extensive damage in its century-plus existence due to water leaks, ice damming and drastic changes in temperature.

PCL's Chris Brooks says approximately 7,000 stone repairs were conducted on 2,700 blocks, with 10 000 kg of new stone installed.

Brooks says inscriptions were made of all the workers and those responsible for the completion of the dome – the plaque was quietly laid at the top of the dome-structure several weeks before the final reveal. The names extend nearly around the entire top portion of the dome.

MINING

Gensource planning small potash mine for south central Saskatchewan

Global News - The CEO of Saskatoon-based Gensource Potash Corp. says their mine will be unique in method and production levels.

Gensource is planning to develop a second small mine in Saskatchewan using a business model it believes is the "future of the industry."

Gensource Potash Corporation reached the agreement with Yancoal Canada Resources this past April. If seen through, the leases would be developed into a mine north-west of Regina, near Eyebrow.

"As part of that arrangement [Yancoal] will agree to purchase . . . the product from us from one of our small production facilities that we plan for this area," said Gensource president and CEO Mike Ferguson in an interview.

Gensource's business model revolves around pre-selling its product before it starts to develop a project.

Gensource's Vanguard Project will produce 250 000 tonnes of potash a year and employ 46 long-term staff, according to Ferguson. The site would be roughly an hour drive from Craik, where the company is developing a separate small mine.

It would likely take more than two years until the site is constructed and producing potash.

Saskatchewan top province for mining investment

Canadian Manufacturing - Saskatchewan and Quebec sit atop the rankings as the two best Canadian jurisdictions for mining investment this year, according to the Fraser Institute's 2015 Survey of Mining Companies.

Assessing regions worldwide for their fitness for mining investment, the think tank's survey asks mining executives to rate 109 different jurisdictions on their geological and policy attractiveness.

Along with taking the top position in Canada, Saskatchewan ranked as the second most mine-friendly jurisdiction in the world, trailing only Western Australia for its mix of mineral and metal wealth and its policy friendliness.

"While Saskatchewan is blessed with potash and uranium reserves, miners also appreciate its approach to mining policy. Compared to other jurisdictions, the province is perceived to have a competitive tax regime, efficient permitting procedures and clarity around land claims," Kenneth Green, senior director of energy and natural resources at the Fraser Institute, said.



Expanded PotashCorp Rocanville will be one of the world's biggest underground mines

Regina Leader-Post - The finishing touches are being put on PotashCorp Rocanville's \$3-billion expansion project, which will double its production capacity, making it one of the biggest underground mines — potash or otherwise — in the world, according to PotashCorp Rocanville's general manager.

"Our planned production is about 5 million tonnes per year," Larry Long told a Saskatchewan Mining Week breakfast. "Obviously this will be dictated by potash markets, but it will be quite a change for us at Rocanville (located about 200 km east of Regina near the Manitoba border). We typically did 2.5 million to 2.7 million tonnes per year, so this is a giant step up."

Long, a mining industry veteran from New Brunswick, said the eight-year expansion project presented many challenges and obstacles to overcome, including a "monster feature" — an unexpectedly large salt formation — which separated the new and existing potash ore bodies.

"We mined straight salt for over a year," Long said, adding that 3-D seismic technology "doesn't tell you what is salt and what is potash. There had to be a leap of faith that we were going to intersect that ore body on the other side."

Fortunately, the PotashCorp team was able to reach the ore body "and it worked out," he told the mining week session hosted by the Saskatchewan Chamber of Commerce and the Association of Professional Engineers and Geoscientists of Saskatchewan.

Starting in 2008, the expansion project employed thousands of construction workers and contractors, both

underground and above ground, working on the installation of mining equipment and buildings. “We had up to 1,800 contractors on the site; that was our peak head count. But there was a long period where there were 1,500 (contractors), plus our own employees.”

When completed, full-time employment will increase to 750, double the present workforce. PotashCorp Rocanville will operate using two mills, the original mill at 1100 tonnes per hour and the new mill at 1300 tonnes per hour, when fully commissioned.

Province's first new potash mine in 40 years

Regina Leader-Post – If building a potash mine was like a horse race, K+S's Legacy Project would be entering the home stretch.

The \$4.1-billion solution potash mine remains on time and on budget to begin production at the end of this year and full commercial production of 2 million tonnes per year by late 2017.

“We will produce the first tonnes of potash at the end of this year,” K+S Canada Potash president and CEO Ulrich Lamp told reporters. “Then we will produce 1 million tonnes in 2017 and achieve our capacity of two million tonnes per year by the end of next year.”

For Lamp, the project is the culmination of a long journey that began on a prairie field and a tent in 2012 when K+S first broke ground at the Legacy mine site, about 70 km northwest of Regina.

The Legacy mine is K+S's largest capital investment to date and the first “greenfield” potash mine to be built in Saskatchewan in more than 40 years.

The project is now in the pre-commissioning phase, with about 90 per cent of capital spent.

URANIUM AND NUCLEAR

CNSC authorizes McClean Lake mill expansion

Saskatoon StarPhoenix – The Cigar Lake uranium mine has cleared an important regulatory hurdle, meaning the new northern Saskatchewan operation is on track to produce 16 million pounds of packaged yellowcake this year.

The Canadian Nuclear Safety Commission (CNSC) authorized an expansion to 24 million pounds from 13 million pounds at Areva Resources Canada Inc.'s McClean Lake mill, where Cigar Lake uranium is processed and packaged.

Cameco Corp., which operates the mine and owns 50 per cent of it, said in a news release that the nuclear watchdog's decision means it can meet its 2016 production

target — of which its share is 8 million pounds — with full production of 18 million pounds expected in 2017.

Located about 70 kilometres from Cigar Lake, Areva's McClean Lake mill recently underwent a multi-million-dollar expansion. The company said in a news release that the production increase will make it the world's second-largest uranium production facility.

“The McClean Lake mill is the most technologically advanced mill in the world for the processing of high-grade uranium ore,” Olivier Wantz, senior vice president of Areva's mining and front end business group said in a statement.

In April, Cameco closed its Rabbit Lake mine in northern Saskatchewan in response to extremely weak uranium prices. The company has said it plans to concentrate on its low-cost mines, including Cigar Lake.

Radioisotopes produced at Saskatoon cyclotron being used in research, soon to be used at RUH

Saskatoon StarPhoenix – The Saskatchewan Centre for Cyclotron Sciences has reached a pair of major benchmarks.

The first use in research of radioisotopes produced at the cyclotron has taken place on the University of Saskatchewan campus and Health Canada has granted clearance for the cyclotron to start supplying radioisotopes for PET-CT scans for patients at Royal University Hospital.

The prostate imaging group at the U of S has used the radioisotopes to help study prostate enlargement and prostate cancer.

“Having radioisotopes available to us opens up a whole new avenue of research,” researcher Murray Pettitt of the U of S Prostate Imaging Group said in a statement.

“These are tremendous achievements, for the Fedoruk Centre and our cyclotron team, for everyone who has been involved in the cyclotron project at the University of Saskatchewan and our partners in government,” said Neil Alexander, executive director of the Fedoruk Centre, which operates the cyclotron.

“Most importantly these achievements signal the beginning of the operational life of Saskatchewan's cyclotron, providing radioisotopes for use by researchers and soon for use by physicians to diagnose Saskatchewan patients.”

Construction of the \$25-million facility was completed in November 2014 after about 15 months of construction.

Calendar Of Events



Registration Deadline for Fall Professional Practice Exam and Law & Ethics Seminar

August 12, 2016

Online

www.apegs.ca

Law and Ethics Seminar

September 9 - 10, 2016

Regina, SK

www.apegs.ca

International Mineral Processing Congress - IMPC 2016

September 11-15, 2016

Quebec City, QC

www.impc.org

MainTrain 2016: Sustainable, Effective, Evolving

September 19-22, 2016

Toronto, ON

www.MainTrain.ca

Geological Society of America Annual Meeting 2016

September 25 - 28, 2016

Denver, CO

www.community.geosociety.org/gsa2016/home

Building a Personal Brand and Selling Skills for Engineers & Geoscientists

September 29, 2016

Vancouver, BC

www.apeg.bc.ca

69th Canadian Geotechnical Conference

October 2 -5, 2016

Vancouver, BC

www.geovanancouver2016.com

Canadian Design-Build Institute Conference 2016

October 13-14, 2016

Winnipeg, MB

www.cdbi.org/conference/2016-conference/

Professional Practice Exam

October 22, 2016

Regina and Saskatoon

www.apegs.ca

Ingenium 2016 – FEC and FGC Reception

October 26, 2016

Winnipeg, MB

www.apegm.mb.ca

Ingenium 2016 - Professional Development Seminars

October 27, 2016

Winnipeg, MB

www.apegm.mb.ca

Ingenium 2016 Engineers Canada Awards Gala and Dance

October 28, 2016

Winnipeg, MB

www.apegm.mb.ca

APEGS Professional Development Days

November 3-4, 2016

Regina, SK

www.apegs.ca