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THE PROFESSIONAL

# EDGE

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PROFILES IN ACHIEVEMENT

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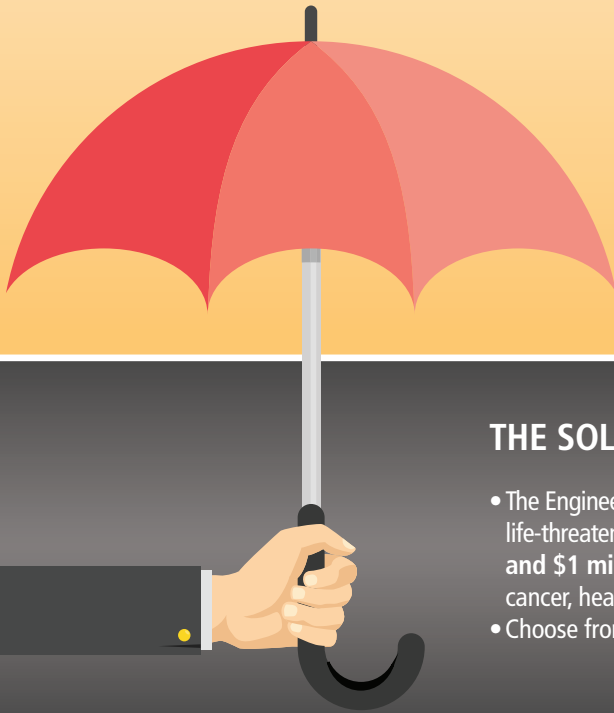
# FACTS CANADIANS NEED TO KNOW ABOUT CRITICAL ILLNESS.

Thanks to medical advances, Canadians are more and more confident about surviving a critical illness. However, many still remain unprepared for the financial impact of such a diagnosis. The Engineers Canada-sponsored Critical Illness Plan can help if the unexpected occurs to you or a family member. Consider the facts below, and ask yourself: Are you financially prepared?



## THE RISK OF CRITICAL ILLNESS.

- **1 in 2 Canadians** will develop cancer in their lifetime.<sup>1</sup>
- **206,200 Canadians** were diagnosed with cancer in 2017.<sup>1</sup>
- About **9 in 10 Canadians** already have at least one risk factor for heart disease and stroke. In Canada:
  - o there is 1 heart attack every 7 minutes.<sup>2</sup>
  - o there are 62,000 strokes every year.<sup>3</sup>



## SURVIVING A CRITICAL ILLNESS.

- About **60%** is the 5-year net survival rate for people diagnosed with cancer, but it varies widely by the type of cancer.<sup>1</sup>
- **2.4 million Canadians** are currently living with the effects of heart disease.<sup>4</sup>
- **400,000 Canadians** are currently living with the effects of stroke.<sup>5</sup>

## UNDERSTANDING THE FINANCIAL IMPACT OF HAVING A CRITICAL ILLNESS.

- Cancer accounts for **\$586 million** in indirect costs from loss of productivity or premature death.<sup>1</sup>
- More than **400,000 Canadians** live with long-term disability from stroke. Recovery can take months or years, even for milder strokes, and many people never fully recover.<sup>5</sup>

## THE SOLUTION: HOW CRITICAL ILLNESS INSURANCE CAN HELP.

- The Engineers Canada-sponsored Critical Illness Plan **pays a lump sum** upon diagnosis of a covered life-threatening condition. You and your spouse may apply for benefit amounts **between \$25,000 and \$1 million** to help meet the costs associated with surviving a serious illness, such as cancer, heart attack or stroke.
- Choose from **two types of coverage**:
  - **Essential** – covers 6 conditions
  - **Enhanced** – covers 18 conditions



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<sup>1</sup>Canadian Cancer Society, 2017. <http://www.cancer.ca/~media/cancer.ca/CW/publications/Canadian%20Cancer%20Statistics/Canadian-Cancer-Statistics-2017-EN.pdf>

<sup>2</sup>Heart and Stroke Foundation of Canada, 2017. <http://www.heartandstroke.ca/what-we-do/media-centre/news-releases/media-opportunity-the-canadian-cardiovascular-congress>

<sup>3</sup>Heart and Stroke Foundation of Canada, 2017. <http://www.heartandstroke.ca/what-we-do/media-centre/news-releases/help-wanted-needs-not-being-met-for-canadians-living-with-stroke>


<sup>4</sup>Public Health Agency of Canada, 2016. <https://www.canada.ca/content/dam/phac-aspc/documents/services/publications/diseases-conditions/heart-disease-maladies-coeur-eng.pdf>

<sup>5</sup>Heart and Stroke Foundation of Canada, 2017. <http://www.strokebestpractices.ca/wp-content/uploads/2017/06/HSS-StrokeReport2017-EN.pdf>

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2018

# PROFILES IN ACHIEVEMENT



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# President's Message



Stormy Holmes, P.Eng., FEC

As you were renewing your membership, I hope you took time to look around the new online member portal, APEGS Central, which makes interacting with APEGS even easier than before. This upgrade came with a lot of effort by our staff and I would like to extend my thanks to them. On the new site you will find information on your profile, invoices, Continuing Professional Development (CPD), applications, your volunteer activities and upcoming events.

You should have received a letter from me in December regarding the CPD program. I hope you took the time to enter your CPD for the 2018 year.

**A**s we move into 2019, we continue along the path of the new CPD program. The program updates include: required reporting, annual ethics refresher, variation program and annual reviews.

Details on these items are within the program document. Please take time to review the document and understand the updated program. Some of the changes we have made to the program make APEGS a leader in self-regulating professions. These changes are also important as we demonstrate to public that we are practising in a manner that protects them.

The APEGS CPD program is a benefit to our members. It can be coordinated with your career development program at work, it will help you track updates for your resume and the outcomes of your activities will stay with you.

Maintaining your CPD program also assists in provincial mobility. In your records for CPD you will identify your scope of practice, the plan and records of completed activities. There is a tracking sheet available for members, but the program is flexible enough to allow you to use your own. The APEGS website has a section under members about CPD where you will find a wealth of information to help you create your CPD program.

We look forward to your feedback as you start working through the updated CPD program.

This edition of *The Edge* is dedicated to Profiles in Achievement. Our members are proud of their accomplishments and this issue is an opportunity to submit information and pictures about projects or programs which highlights their achievements over the past year. The people and projects are wonderful examples of the work that we do to help create a safe and prosperous future.

This edition is an opportunity to celebrate the engineering and geoscience works completed by our members. I encourage you to share this edition of *The Edge* with family and friends and leave it at the front of your office for visitors.



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Welcome to APEGS Central - launched October 19, 2018!

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## Introducing APEGS Central!

APEGS is excited to introduce APEGS Central, the new and improved online profile.  
View and manage the following and more:

- Member information
- Applications
- Subscriptions (Communication Types)
- Pay fees
- CPD reporting
- Volunteering and Committees

We thank our members and applicants for their patience during this major system upgrade and apologize for any inconvenience caused by the service disruption.

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# 2018 PROFILES IN ACHIEVEMENT



Usually our job at *The Professional Edge* is telling Saskatchewan engineering and geoscience stories to APEGS members. This month we're turning the tables. We invited APEGS members to send us pictures and descriptions of their proudest achievements from 2018.

We want to thank the contributors to this special feature. For those of you who didn't contribute this year, we will be doing it again next year, so keep your cameras handy to capture your 2019 engineering or geoscience success stories.



# DEEP Geothermal Signs Agreement With SaskPower

### The Company:

Deep Earth Energy Production Corp. (DEEP) is a Saskatchewan privately held corporation with a mission to develop Saskatchewan's geothermal resources for power generation. DEEP's vision is to be a producer of secure, stable and sustainable energy.

DEEP will harness high-quality geothermal resources with existing drilling and power generation technologies to establish a long-term renewable baseload (24 hours a day, 365 days a year) power supply. DEEP's long-term goal is to develop hundreds of megawatts (MW) of baseload power facilities from small, scalable and repeatable 5-20 MW power plants, each which could power up to 5,000 households.

### The Achievement:

SaskPower and DEEP signed a power purchase agreement that will allow further research into the potential for Saskatchewan's first geothermal power project.

Geothermal power generation passes hot water through an exchanger, creates steam and drives a turbine to produce electricity. The signed agreement allows DEEP to continue a proof of concept study to determine the

feasibility of a five-MW project near Estevan. The proposed plant would generate renewable, zero emission, baseload power from a hot aquifer three kilometres under the Earth's surface.

"We're pleased to complete this agreement with SaskPower as another step towards the commencement of Canada's first geothermal power facility in southeast Saskatchewan," said Kirsten Marcia, P.Geo., President and CEO of DEEP.

"DEEP's Saskatchewan power facility will launch a brand new clean energy sector for the country, and we anticipate significant job creation during the construction and operation of the facility."

The electricity provided by the proposed plant would generate roughly the power required by 5,000 homes and offset about 40,000 metric tonnes of carbon dioxide per year – equal to taking more than 8,000 cars off the roads annually.

### The Team:

DEEP is currently a one-woman shop with Marcia at the head. She also works with a number of geological and engineering contractors including RESPEC (formerly NorthRim).



# Helium Boom Continues in Saskatchewan

### The Institution:

Helium, the gas most of us associate with toy balloons and squeaky voices, has in recent years become big business.

In addition to its novelty uses, the gas is an essential component for medical scanners, space vehicles, electronics and fibre optics.

Saskatchewan is blessed with helium resources, but they were not economic to develop when the gas was plentiful and cheap.

The world is now faced with a helium shortage that has driven prices sky-high and led a veritable 'gold rush' to develop the resource.

A number of in- and out-of-province firms are exploring or have produced helium in the province, including North American Helium, Royal Helium, Weil Group, Canadian Helium and the City of Medicine Hat.

### The Achievement:

According to Melinda Yurkowski, P.Geo., assistant chief geologist, petroleum geology, with the Saskatchewan Geological Survey, 16 new helium wells have recently been drilled in the province, including 13 since 2014. As well, Yurkowski notes that as of the end of December, 2018, 203 permits and leases for the resource have been issued in the province.

"The world price for helium has been volatile but remains high. The biggest sources for the gas come from major liquified natural gas (LNG) producers, like Qatar, who draw off the helium as a byproduct. Other LNG producers like Russia either have or are expected to get in on the act," Yurkowski says.

Even so, Saskatchewan helium producers have a number of advantages.

"The concentration of Saskatchewan helium is much higher than that drawn from LNG so it's a more efficient source. As well, some of the countries that produce a lot of LNG suffer from political instability which makes Saskatchewan a more attractive place to do business."

### The Team:

According to Yurkowski, the number of geologists working in the Saskatchewan helium industry is limited but expected to grow.

"The industry is still in its infancy, so it would be hard to say what the job potential will be. As in any booming resource sector, the sky is the limit. It would be impossible to make a firm prediction."

Yurkowski has published a report on the helium potential of the southwestern Saskatchewan, and is working on the expansion the report to include all of southern Saskatchewan.



# Engineering Student's Mars Simulation Mission



Doug Campbell, Engineer-In-Training

### The Individual:

University of Saskatchewan graduate student Doug Campbell, who dreams of a career in space, spent two weeks on a simulated “space mission” to Mars, deep in the Utah desert.

### The Achievement:

Campbell has been selected to join a two-year scientist-astronaut training program based in the United States that will help him prepare for venturing into outer space research, once space flight becomes more accessible.

Campbell’s mission simulation at the Mars Desert Research Station ranged from growing his own food to doing outdoor explorations in a spacesuit.

“The highlight of each day was putting on the simulation space suit and venturing outside to explore the Martian landscape,” Campbell says.

The station is owned by the Mars Society, which supports Earth-based research for human space exploration and has received funding from the Musk Foundation.

The “full Mars” experience in the Utah desert tested Campbell and his four crew members on teamwork and on research and interpersonal skills in a stressful environment. A mix of Americans and Canadians, the crew included experts in health, geology and engineering.

*“It was an incredible opportunity to learn and develop skills required for long-duration space travel,” Campbell says. “The experience of living in a small, enclosed space with four other people for two weeks required us all to get very good at communicating clearly and working together; skills that I have brought back to my career with the Saskatchewan Health Authority.”*

Campbell invented and is currently testing a waterless dishwasher as a special part of his space simulation. His device holds promise for making astronauts’ lives easier when space travelling.

“It was a unique chance to solve a problem that we take for granted on Earth but would be an issue for astronauts on Mars.”

### The Engineer:

Campbell has three degrees, all from the University of Saskatchewan – a Bachelor of Mechanical Engineering, a Master of Engineering in Biomedical Engineering and a Master of Science in Biomedical Engineering.

In addition to his Martian exploits, he has previously worked at Case New Holland, the Saskatchewan Health Quality Council and currently works with the Saskatchewan Health Authority as Director, Strategy and Innovation.



A Saskatchewan Research Council employee conducts tests for mining clients who are looking to improve recovery rates.

# SRC Developing New Lithium Recovery Technology

## The Institution:

The Saskatchewan Research Council (SRC) is one of Canada's leading providers of applied research, development and demonstration (RD&D), and technology commercialization. With more than 350 employees, more than \$70 million in annual revenue and 71 years of RD&D experience, SRC provides products and services to its 1,500 clients in 20 countries around the world.

## The Achievement:

SRC is working with mining companies to develop lithium recovery processes from various sources to produce battery-grade lithium products, and also to pilot and test new lithium recovery technologies. Its Mining and Minerals team develops, optimizes and tests lithium recovery technologies from all sources – hard rocks, clays and solutions (brine and produced water).

Lithium recovery from hard rock and clay deposits normally involves a series of physical processing and hydrometallurgical steps to remove unwanted elements before being precipitated as lithium carbonate.

SRC has worked with companies in Canada, Australia and the U.S. to recover lithium from spodumene, lepidolite,

petalite, smectite, illite, pegmatite and other lithium-bearing hard rock ores and clay deposits.

In addition to testing and optimizing mining companies' own lithium recovery processes, the Mining and Minerals team is also developing its own more selective and cost-effective lithium recovery from brine technology, to overcome the challenges of the traditional lithium recovery process.

The successful implementation of this selective recovery technology will significantly reduce the lithium production cost – both capital and operating – and make it easier to recover and produce battery-grade lithium.

Brines have the potential to provide major resources for lithium into the future. As the industry grows, there will be new challenges and opportunities that will require innovative methods and processes to help mining companies sustainably get more value out of their brines.

## The Team:

This work is being led by a team of engineers and technologists within SRC's Mineral Processing group, including Jack Zhang, P.Eng., Bryan Schreiner, P.Eng., P.Geo., Baodong Zhao, P.Eng. and Dennis Wang, P.Eng.



# Gensource Potash Achieves Environmental Assessment Milestone

Gensource exploration drill site near Eyebrow

### The Company:

Gensource is based in Saskatoon and is focused on developing Saskatchewan's next potash production facility in that province – but with a radically and fundamentally different approach.

Gensource's President and CEO, Mike Ferguson, P.Eng., has assembled a management and technical team with direct and specific expertise and experience in potash development in Saskatchewan.

Gensource operates under a business plan that has two key components: (1) vertical integration with the market to ensure all production capacity built is directed, and pre-sold, to a specific market, eliminating market-side risk; and (2) technical innovation which will allow for a small and economic potash production facility, which is much friendlier to the environment to construct and operate.

The company is currently pursuing its proposed Vanguard One solution mine project located near Eyebrow.

### The Achievement:

Many natural resource projects face significant, time-consuming environmental assessment review, but Gensource has succeeded in skipping to the front of the

line. The Saskatchewan Ministry of Environment determined the Vanguard One project is not required to complete a full Environmental Impact Assessment since the project has a number of positive environmental attributes that will not trigger the stringent criteria of the *Saskatchewan Environmental Assessment Act*.

Consequently, the project can proceed to the next stage of the environmental regulatory process: Detailed construction licensing.

"This is a fantastic outcome for Gensource and our Vanguard One project and is exactly what the team was working towards. Vanguard One will be much more environmentally friendly with no salt tailings and no brine ponds of any sort. This decision by the Ministry not only confirms one of our core values as a company to provide a cleaner source of potash production but it is also a crucial element to our project success. It enables a much faster, more efficient and cost-effective overall project development timeline," says Ferguson.

### The Team:

Ferguson expects the project will require roughly 75 person-years of engineering to complete design and construction. Once built, the mine will likely employ 3 to 4 engineers.



Solar/wind facility at Cowessess First Nation. Photo courtesy SRC.

# SRC Leads Development of Canada's First Utility-Scale Hybrid Energy Storage System

### The Institution:

The Saskatchewan Research Council (SRC) is one of Canada's leading providers of applied research, development and demonstration (RD&D) and technology commercialization. With more than 350 employees, more than \$70 million in annual revenue and 71 years of RD&D experience, SRC provides products and services to its 1,500 clients in 20 countries around the world.

### The Achievement:

In cooperation with Cowessess First Nation, SRC directed the installation of 1,134 new solar panels at the Cowessess Renewable Energy Storage Facility – a high-level wind turbine and energy storage project originally commissioned in 2013. The existing facility was already equipped with an 800 kW Enercon wind turbine and a SAFT lithium-ion battery system capable of providing 400 kW for 90 minutes.

The solar expansion – an addition of solar photovoltaic panels covering roughly one hectare of land – provides 340 kW in addition to the wind turbine and battery, as well as 56.7 kW to power the facility itself.

In total, the facility produces 2,828 MWh per year, enough to supply power to 344 homes.

The facility marks the first known utility-scale, hybrid wind-solar-storage system in Canada and one that paves the way for further research in renewable energy generation.

### The Team:

This project is led by a team of engineers and technologists within SRC's Development Engineering group including Ryan Jansen, P.Eng., Anton Farber, E.I.T., Mike Sulatisky, P.Eng. and Nathan Peter, P.Eng.





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# Food Security Receives Funding Boost

### The Institution:

Global Institute for Food Security Roots-Soil-Microbial Interactions Laboratory at the University of Saskatchewan was established to support crop research efforts for the Global Institute of Food Security and other agricultural research institutions.

### The Achievement:

Research to tackle global food security received a major boost in March, as the Government of Saskatchewan announced \$800,000 in funding for state-of-the-art equipment in a new research facility at the University of Saskatchewan (U of S).

The money will be provided by Innovation Saskatchewan, through its Innovation and Science Fund. The facility, located on the U of S campus, supports the school's Canada Excellence Research Chair (CERC) in Food Systems and Security research program.

The program is led by internationally recognized plant scientist Leon Kochian, a faculty member in plant and soil

science at the U of S College of Agriculture and BioResources.

Kochian is also Associate Director of the Global Institute for Food Security (GIFS), established in 2012 by PotashCorp (now Nutrien), the Government of Saskatchewan and the U of S.

Research at the facility will focus on designing and breeding better crops with healthier, more active and more efficient root systems that can grow successfully in less fertile soils. The goal is to position Saskatchewan as a national driver for change in agricultural and food security issues facing Canada and the world in the 21st century.

The total cost for the new facility is \$2 million, and additional funds will be provided by the Canada Foundation for Innovation (\$800,000), the U of S (\$9,000) and \$391,000 in in-kind contributions of cutting-edge technology from vendors.

### The Team:

There are currently approximately 40 engineers working on projects directed by GIFS.



# SaskPower Continues Investment in Clean Energy



In September, the Government of Saskatchewan approved the location for Algonquin Power Co.'s Blue Hill Wind Energy Project which is expected to produce 177 megawatts of power, enough to power more than 70,000 homes. The project will be located south of Herbert, Sask. and is expected to include up to 56 wind turbines. The project will begin construction next year, with service possible as early as 2021.

In October, the company announced a second utility-scale wind power project. Potentia Renewables Inc.'s Golden South Wind Energy Facility, to be located near Assiniboia, is a 200-megawatt project that will produce enough renewable electricity for approximately 90,000 Saskatchewan homes. Like the Herbert project, Potentia's facility is expected to be online as early as 2021.

Also this year, SaskPower supported DEEP Corp.'s geothermal project (see profile page 8) and the Cowessess First Nation's wind/solar project (see profile page 13).

### The Team:

SaskPower's renewable energy initiatives rely on the contributions of teams drawn from the over 400 professional engineers employed at the Crown corporation.

### The Company:

SaskPower is the principal supplier of electricity in Saskatchewan, serving more than 533,000 customers and managing \$11 billion in assets. The company operates three coal-fired power stations, seven hydroelectric stations, five natural gas stations, and two wind facilities, and buys power from various independent power producers.

### The Achievement:

As part of its ongoing goal to achieve 40 per cent emission reduction from 2005 levels by 2030, SaskPower launched a number of renewable energy projects in 2018.

In June, the company named Saturn Power as the successful proponent for Saskatchewan's first utility-scale solar power project. SaskPower signed a 20-year power purchase agreement with Saturn Power for the 10 MW project, called the Highfield Solar Project, which will be in the RM of Coulee, east of Swift Current. The project will be in service as early as 2020.



# Member Profile



This month *The Professional Edge* chats with Scott Noble, P.Eng., an agricultural engineer working with the University of Saskatchewan as an associate professor in mechanical engineering.

## Tell us about your personal and professional background.

I grew up in southern Ontario on an acreage near London. I went to the city of Aylmer, ON for school. I did my undergrad studies at the University of Guelph, my master's at the University of Saskatchewan and received my Ph.D. from Guelph.

## Why did you choose to go into engineering, and agricultural engineering specifically?

My earliest memories as a kid were that I wanted to be some sort of scientist or inventor. As a kid, I didn't know what engineering was but in high school it became clear that was what I wanted to do.

Agricultural engineering came to me in a roundabout way. Growing up on an acreage, I was surrounded by farms and agricultural life. I worked at dairy farms when I was in high school. So, the agricultural aspect was always in my blood. My undergrad degree was in Engineering Systems and Computing but as I started to work in that field, I came to see how electronics and computers can be applied in agriculture.

## What was your biggest challenge in college?

I found math increasingly difficult as it became more abstract. I still do. I need to be able to visualize what the math means but as things get more theoretical and abstract I have a harder time with it.

I was in school for a long time so finances were certainly a consideration, but I was pretty fortunate on that score. I enrolled in the work-study co-op program during my undergrad studies and was fortunate to receive a series of scholarships and stipends through my post-grad studies.

## What was your first job after college?

I'm not sure I ever left college! I did post-doctoral work at the University of Lethbridge and then took a faculty position here at the University of Saskatchewan. I've been working here for almost 12 years.

During my co-op work terms, I did some terms working in technical support and as a research assistant but, in one term, I managed to convince them to let me start my own business building acoustic guitars. It was a money-losing venture but it gave me an opportunity for reflection. Those long lonely hours in the guitar shop were where I decided I might be better off as a university professor.

### **What do you feel is your single greatest accomplishment as an engineer?**

One that stands out in my mind is a project a colleague of mine and I worked on at the University of Lethbridge. We built remote sensing implements which caught the attention of the US Navy Research Labs. Building one for them was definitely an experience.

Other than that, it may sound like a cliché, but as an educator, I continually get a kick out of seeing our students become successful, whatever that looks like for them.

### **What are your interests outside of work?**

My son and I do Taekwon-Do for our physical activity. Aside from that, after a long hiatus, I've picked up the guitar again recently – playing for my own enjoyment as well as fixing them up.

I'm not sure if you can call home renovation a hobby but it seems like I'm always working on something around the house.

### **Have you ever met anyone famous?**

Not famous so much but important. I was part of a group of Canadians on an International Visitor Leadership Program tour a few years ago, sponsored by the US Department of State. We were sitting on the patio in Springfield, Illinois when a guy comes in dressed in full camouflage clothing, followed by a couple of guys in dark suits talking into their wrists. It turned out he was the governor of Illinois and it was open season on doves. He was a very friendly, personable guy. It was a weird, chance encounter.

### **What is your favourite vacation spot?**

We usually stick close to home or go east to visit family. But in terms of my broader travel experience, I've been to Montpellier, France a couple of times for work. There is a major agricultural research centre there. I have always felt quite charmed by that city.

### **What is your favourite book or book you are reading now?**

I don't read much for pleasure anymore. I read so much for work that reading for fun doesn't seem so fun. But my all-time favourite book is *The Lord of the Rings*. I enjoy the enormous amount of world-building detail that Tolkien put into his work.

The thing some people don't like about the book – the excessive amount of description – is what I like. I also enjoy the theme of a forgotten history, where some knowledge or technology that was once known is lost.

### **What do you do for continuing professional development (CPD)?**

One of the perks of being a professor is that you cover most of the professional development requirements in the course of the job – speaking at and attending conferences, writing papers and so forth.

One of the more challenging parts of the new CPD requirements is the ethics piece, but we're seeing more courses being offered at the university on topics like diversity and indigenization that should cover that area. I also get opportunities to visit the places former students now work, which is another way I get to expand my professional knowledge.

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

My dad was probably my biggest influence both personally and professionally. Any common-sense, problem-solving and troubleshooting skills I have come from him. Dad trained as a draftsman and spent most of his career working on locomotive design.

While not an engineer, he worked closely with them. He was heavily involved in the introduction of CAD systems into his workplace.

In terms of workplace mentors, it's hard to narrow down but I'd say Valerie Davidson, P.Eng. and Ralph Brown, P.Eng. at the University of Guelph were influential for much of my career trajectory. Trever Crowe, P.Eng. here at the U of S was very helpful for my master's degree and beyond.

## **Member Survey**

APEGS secured Inshtrix Research Inc. to conduct a member survey via email on various aspects of its operations, including member preferences regarding the annual meeting and conference, professional development opportunities and APEGS' communications channels.

The survey was sent during the week of November 12 to all members who have provided approval for APEGS to email them, which was 13,200 of 13,600 members. APEGS thanks all who participated in the survey. Watch for the results in an upcoming issue of *The Professional Edge*.



# Notes from APEGS Council

*The APEGS Council met November 29 and 30, 2018 in Saskatoon. 16 of 19 Councillors were present. Mike Griffin, APEGS legal counsel and Ben Boots, P.Eng., FEC attended as guests. Council will meet next on February 7-8, 2019 in Regina.*

## **Council received the following presentations and information items:**

- Ben Boots, P.Eng., FEC, Chair Sponsorship Task Group, provided a presentation and the draft report to council from the task group. It was noted that the work of the task group should be completed by the spring council planning sessions and their recommendations incorporated into the 2020 budget of the Association.
- Activity updates were provided from the constituent society liaisons, the ACEC-SK liaison and the 30 by 30 Task Group Liaison.
- The Executive Director and Registrar provided council with an update on staffing.
- The Executive Director and Registrar updated council on the 2019 communications plan, which will see the launch of “Dream Big” in the K-12 school system during engineering and geoscience week. Information packages will be sent to all schools and volunteers early in 2019.
- The Executive Director and Registrar reported that renovations to the APEGS office are now complete.
- The Executive Director and Registrar provided an update on the Professional Reliance Model resulting from reviews undertaken in British Columbia. It was recently announced that technologists and engineers will be regulated together in BC.
- The APEGS Directors to Engineers Canada and Geoscientists Canada reported on the activities at the national organizations.
- The Director of Special Projects reported on the status of the new member database. The launch of the new member database in the fall of 2018 has revealed a number fixes and wish list items outstanding. The project team anticipates full completion of all outstanding items by late 2020.
- The President updated council on the activities of The Pacific Northwest Economic Region (PNWER) and the economic summit recently held in Whitehorse.

## **Council passed motions as follows:**

- Approving the Terms of Reference for the new CPD Compliance Committee.
- Approving Policy AR3.0 as updated to include by-pass option 3. The updates allow the Academic Review Committee to focus on complex cases and allow APEGS staff to review the simple cases through a bypass option framework.
- Approving Life Membership for the following members:  
  
Cowan, K. Brian, P.Eng.  
  
Dalrymple, Walter E., P.Eng.  
  
Huggan, William R., P.Eng.  
  
Passy, William G.M., P.Eng.  
  
Schmidt, Larry D., P.Eng.
- Appointing Ernie Barber, P.Ag., P.Eng., FEC and Cory Belyk, P.Geo. as members of the Audit Committee for a one year term.
- Approving the 2019 Budget of the Association.

## **Council noted and received the following reports:**

- Registrar’s reports for October, 2018.
- The report on compliance activities for September 1 to October 31, 2018 and the Continuing Professional Development Implementation Plan Progress Report.
- The unaudited financial statements for September, 2018.
- Executive Committee minutes, Board minutes and the reports from the committees and task groups.

# APEGS Member Disciplined for Professional Misconduct

An Engineer-in-Training member of the Association of Professional Engineers and Geoscientists of Saskatchewan, plead guilty to one count of professional misconduct before a hearing panel of the Discipline Committee on October 31, 2018.

Counsel for the Investigation Committee and for the member filed an Agreed Statement of Conduct with the panel, which was accepted as an admission of Professional Misconduct by the member. The joint submission contained the following admission:

- At the sitting of the Association of Professional Engineers and Geoscientists of Saskatchewan Principles of Professional Practice Exam held in Regina on Saturday, May 27, 2017, the Engineer-in-Training was caught cheating.

The Panel determined that this action by the member was in breach of Section 20(1) of The Regulatory Bylaws and that this breach constituted Professional Misconduct as defined in subsections 30(b) of *The Engineering and Geoscience Professions Act*.

In the Submission as to Disposition, the Investigation Committee cited Casey, Regulation of Professions, 2005 – Release 1, Section 14.2, Purposes of Sentencing, pages 14-5 to 14-9.

The Hearing Panel acknowledged that the fundamental principles of sentencing for Professional Misconduct is the protection of the public.

The Hearing Panel also considered the following factors when determining its sentence:

- the gravity of the offence;
- the risk to public safety;
- specific deterrence of the member from engaging in further misconduct;
- general deterrence of other members of the profession;
- rehabilitation of the offender;
- punishment of the offender;
- denunciation by society of the conduct and
- the range of sentences in other cases.

The Hearing Panel also considered mitigating circumstances:

- member's age and experience;
- history of the member's professional conduct;
- member's acknowledgement of responsibility;
- previous service history of the member; and
- member's good character.

The Hearing Panel wishes to make it clear that it considers cheating on the Professional Practice Exam to be an extremely serious form of Professional Misconduct. Such behaviour is corrosive to the high standards of integrity expected of professional engineers and professional geoscientists. However, in coming to its decision, the Hearing Panel placed more emphasis on education and rehabilitation than on punishment.

Having taken into account all of the above, the Hearing Panel ordered as follows:

1. That the member is hereby reprimanded for Professional Misconduct;
2. That the member be ineligible to write the Professional Practice Exam and/or apply for registration with APEGS as a professional engineer until the examination provided in the spring of 2019;
3. That the member satisfactorily complete the "Working in Canada Seminar" offered by Engineers & Geoscientists British Columbia and provide proof of completion to the Registrar prior to attending the APEGS Law & Ethics Seminar and writing the Professional Practice Exam;
4. That as a condition of any application for registration with APEGS as a professional engineer, the member shall attend the Law & Ethics seminar prior to writing and passing the Professional Practice Exam;
5. That the member must satisfactorily complete a competency assessment by completing Competency Categories 2 and 5 of the APEGS competency-based assessment system and the requirements set out therein prior to registration as a professional engineer. Competency Categories 2 and 5 are as follows:

## **2. Communication** (minimum overall competence level: 3)

### Key Competencies

- 2.1 Oral.
- 2.2 In writing.
- 2.3 Reading and comprehension.

## **5. Professional Accountability** (Ethics & Professionalism) (minimum overall competence level: 3)

### Key Competencies

- 5.1 Work with integrity, ethically and within professional standards (Indicators: Comply with the Code of Ethics; Apply professional ethics in meeting corporate directives).
  - 5.2 Demonstrate an awareness of your own scope of practice and limitations.
  - 5.3 Understand how conflict of interest affects your practice.
  - 5.4 Demonstrate awareness of professional accountability.
  - 5.5 Demonstrate an understanding of appropriate use of the stamp and seal.
  - 5.6 Understand own strengths/weaknesses and know how they apply to one's position.
6. That the member pay the costs of investigation and hearing of \$2,500, to be paid within two years and prior to registration as a professional engineer; and
  7. That the Decision & Order shall be published on the APEGS website and in *The Professional Edge*, without name.

Once all of the above orders are met, the member would be eligible to apply for reinstatement.

# APEGS Member Disciplined for Professional Misconduct

A professional engineer member of the Association of Professional Engineers and Geoscientists of Saskatchewan was found guilty of Professional Misconduct following a discipline hearing held on November 28, 2018. Mr. Behnam Torkan, P.Eng. plead guilty to two counts of Professional Misconduct:

- that the member published a structural review bearing his professional seal and signature which contained calculations found to be in error; and
- that the member failed to comply with an order of the Investigation Committee.

The Panel determined that these actions by the member were in breach of Sections 20(2)(b) of The Regulatory Bylaws and in subsections 30(d) of *The Engineering and Geoscience Professions Act*.

After receiving and reviewing evidence in the forms of exhibits and expert witness testimony, the Discipline Hearing Panel found that Mr. Behnam Torkan, P.Eng. was guilty of Professional Misconduct.

The Discipline Hearing Panel acknowledged that the fundamental purpose of sentencing for Professional Misconduct is the protection of the public.

The Discipline Hearing Panel also considered the following factors when determining its sentence:

- the gravity of the offence;
- the risk to public safety;
- specific deterrence of the member from engaging in further misconduct;
- general deterrence of other members of the profession;
- rehabilitation of the offender;
- punishment of the offender
- denunciation by society of the conduct; and
- the range of sentences in other cases.

The Discipline Hearing Panel also considered mitigating circumstances:

- the member's acknowledgement of responsibility;
- the member's plea for leniency in the financial penalty; and
- the impact of the decision on the member's employability as a Professional Engineer.

Having taken into account all of the above, the Discipline Hearing Panel ordered as follows:

1. Behnam Torkan, P.Eng. is hereby reprimanded for Professional Misconduct.
2. As Behnam Torkan, P.Eng. is not currently a member of the Association, he shall not be allowed to apply for reinstatement until the later of: one year from the date of the Discipline Hearing (November 28, 2018), or after having met the following conditions:
  - A. successfully completing the APEGS Law & Ethics Seminar and passing the APEGS Professional Practice Exam (PPE), or equivalent courses and exams in other Canadian jurisdictions, approved by APEGS;

- B. successfully completing upper year structural engineering courses approved by APEGS at a Canadian Engineering Accreditation Board (CEAB) accredited university, in:
  - i. Structural Steel Design (CSA S16),
  - ii. Reinforced Concrete (CSA A23.3) and
  - iii. the National Building Code of Canada, specifically related to structural engineering;
- C. successfully completing the Engineers and Geoscientists British Columbia "Working in Canada" seminar and providing written confirmation to the Association that he has done so;

- D. satisfactorily completing a competency assessment by completing competency categories 5, 6.1, 6.2 and 6.3 of the APEGS Competency-Based Assessment system and the requirements set out therein (all validators are to be Professional Engineers, licensed in Canada). Competency categories 5, 6.1, 6.2 and 6.3 are as follows:

## **5. Professional Accountability (Ethics & Professionalism)** (minimum overall competence level: 3)

### Key Competencies

- 5.1 Work with integrity, ethically and within professional standards (Indicators: Comply with the Code of Ethics; Apply professional ethics in meeting corporate directives).
- 5.2 Demonstrate an awareness of your own scope of practice and limitations.
- 5.3 Understand how conflict of interest affects your practice.
- 5.4 Demonstrate awareness of professional accountability.
- 5.5 Demonstrate an understanding of appropriate use of the stamp and seal.
- 5.6 Understand own strengths/weaknesses and know how they apply to one's position.

## **6. Social, Economic, Environmental and Sustainability** (minimum overall competence level: 2)

### Key Competencies

- 6.1 Demonstrate an understanding of the safeguards required to protect the public and the methods of mitigating adverse impacts.
- 6.2 Demonstrate an understanding of the relationship between the engineering activity and the public.
- 6.3 Understand the role of regulatory bodies on the practice of engineering.

- E. paying a fine to the Association of \$5,000 for Charge 2;
  - F. paying a portion of the costs of the Discipline Hearing to the Association in the amount of \$3,500.
3. Once all the above orders are met, Behnam Torkan, P.Eng., would be eligible to apply for reinstatement.
  4. In addition, the Decision and Order of the Discipline Hearing Panel shall be published with names on the APEGS website, in *The Professional Edge* and *e-Edge*.



## Report on the Professional Practice Exam - 2018

SUBMITTED BY SHAWNA L. ARGUE, P.ENG., MBA, FEC, FCSSE, FGC(HON) – APEGS DIRECTOR OF REGISTRATION

In 2018, 295 candidates wrote The Professional Practice Exam, an increase of 55 candidates over 2017.

	MAY 26	SPRING ALTERNATE EXAM	NOVEMBER 3	FALL ALTERNATE EXAM
# of Candidates	165	6	120	4
Highest Mark (%)	96.5%	93.5%	93%	90%
Average Mark (%)	78.8%	84.8%	78.2%	78.2%
# Failures*	2	0	1	0

\* The grade required to pass the exam is 65%.

## 2019 Registration, Seminar and Exam Dates

### Spring 2019 Exam

- **March 15, 2019** - Registration deadlines for spring exam and seminar, applications for special accommodations and deadline for submission of post-bachelors work experience report (if none submitted previously). The application form is in the related documents below. Note that Temporary Licensees who are writing the PPE do not have to submit any experience reports.
- **April 12 and 13, 2019** - Law and Ethics Seminar (Saskatoon)
- **May 25, 2019** - 9:00 am - Professional Practice Exam (Regina and Saskatoon)

### Fall 2019 Exam

- **August 16, 2019** - Registration deadlines for fall exam and seminar, applications for special accommodations

and deadline for submission of post-bachelors work experience report (if none submitted previously). The application form is in the related documents below. Note that Temporary Licensees who are writing the PPE do not have to submit any experience reports.

- **September 27 and 28, 2019** - Law and Ethics Seminar (Regina)
- **November 2, 2019** - 9:00 am - Professional Practice Exam (Regina and Saskatoon)

### Seminar

The seminar runs from 8:00 a.m. to 5:00 p.m. on Friday and 8:00 a.m. to approximately 4:30 pm on Saturday. Complete exam information, including the application form and how to order textbooks, can be found at [apegs.ca](http://apegs.ca) under **Apply, Professional Practice Exam**.

## Competency-Based Assessment for Engineers-in-Training is here!



Competency-Based Assessment (CBA), the new online experience reporting system forengineers-in-training came into effect on January 1, 2019. For more details, please visit [apegs.ca](http://apegs.ca) under Members, Competency-Based Assessment (CBA).

### For more information, contact:

Tina Maki, P.Eng., FEC, FGC (Hon.),  
Director of Special Projects  
[tmaki@apegs.ca](mailto:tmaki@apegs.ca), 306-525-9547 (in  
Regina) or 1-800-500-9547 (toll free North America)

# Fall Professional Development Days Recap



**Congratulations to the first CTEL cohort receiving their Silver Level Certificates**

The APEGS Fall Professional Development Days were held at the Radisson Hotel in Saskatoon on November 5-6. The Professional Development Committee (PDC) organizers were excited to unveil some of new initiatives for this long-standing two-day event.

The event started out with a new course from the creators of the “Get to the Point! Technical Writing Class”.

This new offering from CTEL™ (The Centre for Technical and Engineering Leadership) is accredited by the Engineering Institute of Canada and allowed participants to learn valuable leadership skills.

Topics for this event included *Managing Change, Thinking Ethically, Leading the Way and Communicating in Business.*

Participants enrolled in the CTEL program had the option of taking all four courses to earn a Silver Certificate, or attending individual sessions.

Because of the positive reviews received from participants, APEGS will offer the next level of the CTEL program on February 28 and March 1, 2019 in Regina. More details for this upcoming event can be found on the APEGS website.

The second professional development track was not to be outdone by the first. APEGS was pleased to have three speakers attend to talk about climate change and its effect on the province and the implications it has for future civil development projects.

There was also a session on *Psychological Health and Wellness in the Workplace* that was very well received.

The event ended with another initiative started by the PDC. APEGS received feedback from its members that budgetary constraints are one of the reasons members do not attend the Professional Development Days.

The PDC listened and was pleased to offer two free professional development sessions for the first time. *Financial Planning and Continuing Professional Development Planning* were the chosen topics for these sessions and were both very well received by the attendees.

levenegsb.ca!'."/>

**The power of an MBA**

Add fundamental business knowledge to your technical experience and discover unlimited career potential with a **Levene MBA**. Register for an info session at [levenegsb.ca!](http://levenegsb.ca!)

# APEGS Ambassadors Required!



*There are a million reasons to volunteer, whether it's to build new skills to round out your resume, give back to your community, meet new people or earn Continuing Professional Development credits. You might even be “volunteered” by your employer.*

Regardless of the reason, APEGS has many ambassador opportunities throughout the year for Kindergarten to Grade 12 and university level events.

Share your experience, be a STEM (science, technology, engineering and math) booster and influence others to follow a career in engineering and geoscience.

APEGS participates in high school and school division career fairs and provides funding and ambassadors for university-level events such as design competitions, conferences and community outreach.

These activities advance APEGS' strategic goal of sustaining the professions. Many of these activities are targeted to APEGS' goal of “30 by 30” – achieve 30 per cent participation of women in the professions by 2030.

## Ambassadors are needed to:

- assist with managing display booths and interacting with students;
- promote engineering and geoscience as a career choice; encourage student interest in STEM;
- assist with in-class projects;
- judge design competitions, present awards and provide coaching and networking for university students.

Ambassadors are also encouraged to support STEM enrichment within their children's classrooms. APEGS has many items for your use.

## Becoming an APEGS Ambassador is easy!

Access your APEGS Central profile and choose **onetime events** and **outreach activities** as your volunteer activities. APEGS polls interested members through email. If you are able to contribute your time and talent, reply to the email and we will be in touch with details.



## PROFESSIONAL Development Days

### Spring Professional Development Days

**Date:** February 26, 2019

**Location:** Lloydminster, SK

**Topics include:**

- Business Communications
- Coaching Skills for Professional Leaders
- CPD Planning
- Notarius – Use of digital signatures
- Qualified Persons (QP) short course for oil and gas exploration
- Ethics presentation during networking lunch

For more information, please visit [apegs.ca](http://apegs.ca)

### CTEL (Centre for Technical and Engineering Leadership) Training

**Date:** February 28 and March 1, 2019

**Location:** Regina, SK

**Topics include:**

- Building Successful Teams
- Understanding Personality Types
- Managing Conflict
- Time Management

For more information, please visit [apegs.ca](http://apegs.ca)

## REQUIRED CPD REPORTING Now In Effect!



As of January 1, 2019, the new Continuing Professional Development Program comes into effect. For more details, please visit [apegs.ca](http://apegs.ca)

**For more information, please contact:**

- Shawna Argue, P.Eng., MBA, FEC, FCSSE, FGC (Hon), Director of Registration  
Email: [sargue@apegs.ca](mailto:sargue@apegs.ca)  
Phone: 306-525-9547 (in Regina) or 1-800-500-9547 (toll-free)
- Jolene Arthur, Compliance Coordinator  
Email: [jarthur@apegs.ca](mailto:jarthur@apegs.ca)  
Phone: 306-525-9547 (in Regina) or 1-800-500-9547 (toll-free)

**SAVE THE DATE!**

## Get to the Point!

### A Technical Writing Course

**Date:** May 1 - 2, 2019

**Location:** Regina, SK

**Registration opens March 1, 2019**

**Stay tuned for more details**



# Mandatory Ethics Training

**Starting January 1, 2019 APEGS members are required to obtain at least one hour of verifiable ethics training. How can members meet this obligation?**

## **Here's how:**

- 1.** There are many activities you may already be involved with:
  - Law and Ethics Seminar
  - Professional Development Days ethics courses
  - Employer provided programs (e.g. reviews of corporate policies on privacy, use of corporate computers, client relations, anti-corruption, respectful workplace)
  - Teaching an ethics course
  - Review of ethics at meetings (attendance, duration and topic to be recorded)
  - Online ethics modules
  - Attendance at other ethics conferences/workshops
  - Continuing education offerings related to ethics
- 2.** APEGS offers ethics training - If your organization is interested in hosting an ethics training session for your employees or members, contact the APEGS office. To arrange a booking, please contact Jolene Arthur at [jarthur@apegs.ca](mailto:jarthur@apegs.ca).
- 3.** Coming in April – APEGS online ethics module – free to all APEGS members





2018 World Mining Competition Committee

## Report from the World Mining Competition Committee

The World Mining Competition (WMC) is the largest multidisciplinary mining undergraduate case competition in Canada. The WMC strives to provide a world-class case that allows our delegates to demonstrate their knowledge and critical thinking skills to executives from industry-leading companies.

WMC held its Seventh Annual World Mining Competition on October 25 - 28, 2018 in Saskatoon. We were proud to have APEGS as a Gold Sponsor for that event. We would like to thank APEGS for supporting our organization and all the students across the globe that came to compete this year.

Our goal this year was clear: To empower multidisciplinary collaboration and to enhance our delegates' understanding of the global mining industry through experiential learning. We are happy to say that we exceeded our goals and that this year's competition was a great success.

This year we had 16 teams compete from 14 different universities from five countries (Canada, USA, Chile, UK, Germany).

We also had 40 industry volunteers judge and speak at the competition and 48 student volunteers at various events.

We take pride every year in the caliber of students our competition attracts and this year was no exception. Our delegates spent 36 hours of the competition developing effective, economic and robust solutions.

Thank you again to APEGS for its support. We hope to see you next year.

For more information, visit  
[www.worldminingcompetition.com](http://www.worldminingcompetition.com)



# Call for Council Nominations



## Nominating Committee

The Nominating Committee is soliciting names for the Council positions described below. You may contact staff support to the Nominating Committee, Shawna Argue, at [sargue@apegs.ca](mailto:sargue@apegs.ca) to propose names of potential candidates. Shawna may also be reached through the APEGS office in Regina by phone at 306-525-9547 (toll-free 1-800-500-9547 North America), or facsimile 306-525-0851.

The Bylaws require the Nominating Committee to nominate, whenever possible, the person holding the office of President-Elect for President, and one person for the position of President-Elect (typically the person holding the office of Vice-President). Terry Fonstad, P.Eng., FEC is the current President-Elect and Andrew Lockwood, P.Eng., FEC is the current Vice-President. The Nominating Committee is also required to nominate, whenever possible, at least two persons for Vice-President and at least two persons for each vacancy on the Council.

## Submissions of Nominations

Any five members may nominate over their signatures an eligible nominee for any elective office, except that of President. Such nominations shall be in the hands of the Registrar at least 45 days before the election is to take place. To meet this requirement, the nominations must be in the APEGS office no later than 5 p.m., Thursday, March 14, 2019, as the election will take place when ballots are counted on Monday, April 29, 2019, the polling day.

## 2019 Vacancies & Terms of Office

### Officers

- President-Elect – one-year term
- Vice-President – one-year term

### Group and Electoral District Councillors – to serve a three-year term

- Group I (Civil)
- Group III (Electrical and Engineering Physics)
- Group IV (Geological, Mining, Petroleum, Geophysics and Geoscientists)
- Group VII (Environmental)

## Terms of Office

Only members in good standing are eligible for nomination.

A person elected to Council may only hold office while a resident of Saskatchewan.

A person nominated for President-Elect must have served at least one full year (i.e. from the close of business at one Annual Meeting to the close of business at the next Annual Meeting) as a member of APEGS Council prior to the date on which they would assume office as President-Elect.

A person nominated as a representative of an electoral group must be classified with the Association in that electoral group. The Councillor representing Members-in-Training can complete the term of office after obtaining his or her P.Eng. or P.Geo. status.

<http://www.apegs.ca/Portal/Pages/council-elections>

# MLA Reception



*APEGs held its 18th annual MLA Reception on Wednesday, November 21, 2018 in Regina. The reception provides an opportunity for MLAs to meet with members of the Association including Council, past presidents and committee chairs. A variety of issues related to the engineering and geoscience professions were discussed in an informal setting.*

APEGs President Stormy Holmes, P.Eng., welcomed all in attendance and presided over a short program, which included greetings from the Honourable Warren Kaeding and Trent Wotherspoon.



The Honourable Warren Kaeding, Melville-Saltcoats, Minister of Government Relations and Minister of First Nations, Métis and Northern Affairs





Trent Wotherspoon, Regina Rosemont, former interim leader of the Saskatchewan New Democratic Party, who has served as the opposition critic for Finance, Education, Municipal Relations, Urban Affairs, Economy and the Global Transportation Hub

*APEGS would like to thank the MLAs for attending the reception and the council and committee volunteers for helping make the event a success.*

## APEGS Government Relations

The privilege of self-regulation for engineering and geoscience is granted through *The Engineering and Geoscience Professions Act*, an Act of the provincial legislature. APEGS' role of safeguarding the public and regulating the professions in the public interest is clearly stated in the *Act and Bylaws*. It is through a variety of government relations activities that APEGS builds relationships with our elected representatives, both government and opposition, to ensure that they understand the role of engineers and geoscientists in creating "a safe and prosperous future" for Saskatchewan.

Some of the opportunities for interaction are initiated by APEGS. Some of the opportunities are created by the elected representatives and some of the opportunities are created by third parties. For example, the annual APEGS MLA reception is an integral part of APEGS' overall government relations activities, and is initiated by invitation from APEGS. Events such as the Premier's and opposition leader's receptions, dinners and golf tournaments are initiated by invitation from the respective political parties. Both APEGS and elected representatives are often invited to and interact at events organized by third parties.

It is through these relationships and government relations activities that our elected representatives recognize APEGS' contributions and view APEGS members as "trusted advisors".



**A P E G S**

*Association of Professional Engineers  
& Geoscientists of Saskatchewan*

## 89th Annual Meeting and Professional Development Conference



*Working Together. Engaging Communities*

**MAY 2 - 4, 2019** Hotel Saskatchewan, Regina SK

### **THURSDAY MAY 2**

Evening Welcome Event

**Jersey Night**

Mosaic Stadium

### **SATURDAY MAY 4**

Business Meeting

Youth Science Day

Engineering for Kids

Volunteer Luncheon

Awards Banquet

### **FRIDAY MAY 3**

Breakfast Keynote - Deanna Burgart

Professional Development Streams

Professional Development Luncheon

Luncheon Keynote - Christopher Sands

President's Reception

**Registration will open**

**February 2019**



# News Beyond Our Borders

## Institute for Canadian Citizenship report notes barriers for international engineering graduates



*Engineering Dimensions* - In September, the Institute for Canadian Citizenship (ICC) released a report on the barriers faced by international engineering graduates (IEGs). The ICC is a national charity that delivers programs and special projects and publishes reports on citizenship and inclusion.

Its new report, *Closed Shops: Making Canada's Engineering Profession More Inclusive of International Engineers*, examines Canada's immigration system and reviews the licensure process, with an aim to identify ways IEGs might face unique barriers and makes recommendations for change.

Its recommendations are aimed at Engineers Canada, provincial engineering regulators, immigration officials, policy-makers, fairness commissioners, employers, universities, settlement support agencies and IEGs.

In its examination of licensure and employment processes, the report's findings suggest a systemic bias and suggests this is due to an overly complex and misunderstood system that is not consistent from province to province. Finally, it suggests streamlining processes and reducing information gaps.

### PEO responds to the Fairness Commissioner

*Engineering Dimensions* - While acknowledging that Professional Engineers Ontario's (PEO) 12-month Canadian work experience requirement for all applicants for licensure may not strictly comply with the provisions of the *Fair Access to Regulated Professions and Compulsory Trades Act*, the association expressed confidence to the Office of the Fairness Commissioner (OFC) that the requirement is necessary when considering its legislated mandate to protect the public interest.

Currently, all applicants wishing to obtain their licence to practise engineering in Ontario must have a minimum one

year of Canadian experience under the supervision of a licensed professional engineer. The OFC conducts annual reviews of the registration practices of all regulatory bodies in Ontario, including PEO.

In a March 15, 2018, letter to PEO—and in subsequent face-to-face meetings in April and July—Fairness Commissioner Grant Jameson stated that PEO's mandatory Canadian experience fails to meet an Ontario Human Rights Commission policy requiring "regulatory bodies to show that a requirement for prior work experience in Canada is a bona fide requirement."

As a result, Jameson stated that PEO is not living up to its duties in the *Fair Registration Practices Code of the Fair Access to Regulated Professions and Compulsory Trades Act*.

In a letter to Jameson, PEO Interim Registrar Johnny Zuccon, P.Eng., FEC, responded to Jameson's concern, noting that PEO has a mandate to protect public safety. He also noted all 12 Canadian engineering regulators have universal licensing requirements to ease inter-provincial mobility.

Jameson noted that PEO's rationale behind the one year of Canadian experience under the supervision of a licensed engineer—reaffirmed in a 2015 PEO Council statement—is "insufficient," as "it focuses on the importance of an applicant receiving validation from an individual already licensed by PEO and does not demonstrate openness to alternative methods for applicants to prove they are fully competent to practise in Ontario."

### Restoring public confidence in regulators



*Engineering Dimensions* - In Canada and around the world, professional regulators are facing increased scrutiny by both the public and governments for perceptions they're doing too little to protect the public and too much to guard their own.

Such was the warning delivered to delegates of an interactive governance training workshop on September

17-18 in Toronto, hosted by the Ontario College of Pharmacists and organized by the Council on Licensure, Enforcement and Regulation (CLEAR).

The solution for regulators, according to workshop facilitators, is to create trust by building competence in their governance and processes and being honest, accountable and consistent in their regulatory decisions—especially around discipline.

Skepticism around professional regulators gained public prominence in both the United Kingdom and the United States in the 2000s.

In the UK, it was prompted by the public's horror around serial killer doctor Harold Shipman, who killed at least 250 patients with lethal doses of morphine.

The fact that Shipman's deadly actions continued for years without drawing any legal or regulatory attention prompted the UK government to create the Professional Standards Authority (PSA)—an arm's length "regulator of regulators" that now oversees the UK's health professions.

In the US, several massive corporate frauds—Enron, WorldCom and Tyco—cast doubt on the public accounting profession and ultimately brought passage of the Sarbanes-Oxley Act that set new requirements for public accounting firms.

More recently, in Canada, there have been several media reports questioning regulators' perceived ability—and will—to protect the public.

Workshop participants reviewed recent headlines about Ontario regulators of doctors, dentists and pharmacists issuing secret cautions to practitioners that were hidden from the public, as well as about the College of Nurses of Ontario, who came

under fire for their dealings with serial killer and former nurse Elizabeth Wettlaufer.

These and other stories raise questions about all self-regulated professions: Who are they protecting? The public or themselves? The key to building trust, according to the facilitators, is competent regulation, and honesty and transparency in regulatory decision making.



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## THE LIEUTENANT GOVERNOR'S MERITORIOUS ACHIEVEMENT AWARD



**(L to R): The Honourable W. Thomas Molloy, Lieutenant Governor of Saskatchewan, presenting Ken Linnen, P.Eng., FEC the prestigious Lieutenant Governor of Saskatchewan Meritorious Achievement Award.**

The Association of Consulting Engineering Companies – Saskatchewan (ACEC-SK) honoured Kenneth George Linnen, P. Eng., FEC as the 2018 recipient of the prestigious Lieutenant Governor Meritorious Achievement Award at their annual Awards of Distinction on November 20, 2018 in Saskatoon.

Ken Linnen grew up on the family farm near Francis, SK and graduated in civil engineering from the University of Saskatchewan in 1972.

After several years in the public sector, during which he became Director of the Land Department at the Saskatchewan Housing Corporation, Ken entered the consulting field in the 1980s. He was Saskatchewan manager at Delcan, Vice-President of DWL Engineering and became Principal Civil Engineer at Stantec, responsible for municipal and land development services within Saskatchewan.

With more than 38 years of engineering design and project management experience, his experience has made him a most sought-after resource for high-profile projects in this province. He has been the Principal-in-Charge of the consulting team for numerous Regina subdivisions such as Harbour Landing, Wascana View, Woodland Grove, Windsor Park, Riverbend and Wood Meadows, providing communities for over 20,000 residents. Ken has served as project manager for infrastructure improvements and community plans for 15 First Nations communities in southern Saskatchewan.

Other significant projects in Ken's long list of contributions include Owner's Engineer for the planning and design of the Global Transportation Hub and Principal-in-Charge of the Grant Road School Storm Detention Site (which won both an ACEC-SK and an APEGS Award of Excellence). He was also Principal-in-Charge for the conversion of the Plains Hospital to Saskatchewan Polytechnic and several pumping stations for Enbridge Pipeline. He also planned and developed a new subdivision for the City of Weyburn.

Ken has been an active contributor to his profession and his community. He has volunteered with numerous sports, cultural and professional organizations, including youth curling coach, councilor and mayor of Kronau and President of the Regina Lions Band organization (which served more than 400 students).

He has been a volunteer with the Regina Symphony Orchestra, CNIB, 2005 Canada Summer Games Cycling Committee, 2011 World Mens' Curling Championship and Campbell Collegiate Music Parents' Association.

Ken has always been a strong supporter of both the Association of Professional Engineers and Geoscientists (APEGS) and Association of Consulting Engineers of Canada - Saskatchewan (ACEC-SK). He has served as an ACEC-SK Board Member, committee member and chair of APEGS Limited Licensee Admissions Committee, member of APEGS Professional Edge Committee and APEGS representative on a national committee reviewing competency-based licensure. He also served many years as an industry evaluator for the University of Regina Engineering Fourth Year Project Presentations.

### AWARDS and CITATIONS:

- Regina Engineering Society Volunteer of the Year 2009.
- University of Saskatchewan Alumni Achievement Award 2011.
- APEGS Citation for contributions to the Competency-Based.
- Assessment of Engineering Work Experience Pilot Project 2012.

Ken and his wife Sue have three daughters and seven grandchildren.



## ACEC-SK 2018 AWARDS OF DISTINCTION

### PINNACLE Award & Award of Excellence

(Municipal Infrastructure & Water Resources  
Category)

#### AECOM Canada Ltd.

Project: Saskatoon Southeast Water  
Supply System (SSEWSS) Zelma East  
Project  
Client/Owner: SaskWater

### Buildings Category Award of Merit

#### WSP Canada

Project: SaskTel Tier III Data Centre  
Client/Owner: SaskTel

### Environmental Category Award of Merit

#### PINTER & Associates Ltd.

Project: Enhanced Anaerobic  
Bioremediation Achieves Cost Effective  
Closure  
Client/Owner: Kevin Leung, Country North  
Shell

### Natural Resources and Energy Production

#### Award of Excellence

#### Associated Engineering

Project: Livestock and Forage Center of  
Excellence  
Client/Owner: University of Saskatchewan

### Transportation Award of Merit

#### Stantec Consulting Ltd.

Project: Highway 17 over Battle River  
Bridge Rehabilitation  
Client/Owner: Saskatchewan Ministry of  
Highways & Infrastructure

### 2018 Young Professional Award

**Nicholas Kaminski, P. Eng., PMP., KGS Group Consulting  
Engineers**



(L to R): Bryce Hunter, P.Eng., ACEC-SK Chair presents the 2018 Young Professional Award to Nicholas Kaminski, P.Eng., PMP

### Community Initiative Award

**Stantec** received ACEC-SK's 2018 Community Initiative Award for their Stantec + Soul's Harbour Rescue Mission

### Mentor Award

The 2018 ACEC-SK Mentor Award was presented to **Lawrence Pinter, P.Eng.**

### 2018 Brian Eckel Memorial Scholarship Award

2018 Brian Eckel Memorial Scholarship Award was presented to **Michael Luciuk**, a third-year engineering physics and computer science student at the University of Saskatchewan.



(L to R): Michael Luciuk accepting the 2018 Brian Eckel Memorial Scholarship Award from Bryce Hunter, P.Eng., ACEC-SK Board Chair.

# News From The Field

## Mars lander features SK chain mail skirt



CBC News - Most people involved in the successful deployment of the Mars InSight lander were on the edge of their seats as the spacecraft made its precarious journey to the surface of the Red Planet.

Not Saskatoon entrepreneur and mechanical engineer Bernice Daniels.

“I was actually busy and I forgot,” Daniels confessed.

Daniels is a co-founder of chain-mail company The Ring Lord. In her defence, the Saskatoon-based company’s work with NASA happened back in 2013 and there was no guarantee that the parts they helped produce would ever make it to Mars.

When news of the successful landing hit, Daniels started poking around to find out if her company’s contribution had ended up being a part of the long journey to another world.

InSight is scheduled to spend the next two years measuring seismic activity and magnetic fields on the Red Planet. It will also take Mars’s interior temperature. Some of InSight’s sensitive instruments need protection. The Ring Lord’s chain mail is perfect for the job.

“InSight has a skirt that hangs down on the bottom of it, basically hugging the dirt,” said Daniels.

InSight travelled almost 500 million kilometres on its indirect trip to Mars. The Ring Lord stakes its claim on Mars indirectly. NASA contacted an off-shoot company, founded by some of Daniels’ former employees, called MailleTec Industries. That company built InSight’s protective skirt with materials purchased from The Ring Lord.

NASA is not The Ring Lords first high-profile customer. The

company has also worked with Boeing and SpaceX, Daniels said.

The Ring Lord also helps create costumes for film and television. The business has grown so much they now have a massive manufacturing plant in Toronto.

## OIL AND GAS

### Moosomin’s IJACK is changing pumpjacks



Pipeline News - He was working on designing farm equipment when Dan McCarthy, P.Eng. came up with an idea for a new pumping unit to replace the venerable walking beam pumpjack.

Now, his company, IJACK Technologies Inc., has been gaining market share in Manitoba and has since branched into two other products for gas compression. Most of this has happened during the worst oil downturn seen in decades.

IJACK Technologies Inc. is based in Redvers and is currently working out of a shop just down Highway 1 at Wapella. That’s going to be changing soon, however, as the company is building a brand new and much larger facility on the north edge of Moosomin.

The company was incorporated in 2010 and started actively selling its hydraulic jack, the UNO, in 2013.

McCarthy grew up on a mixed grain and cattle farm south of Moosomin.

“I’m from the agriculture world. I didn’t know anything about the poor reputation of hydraulic jacks,” he said, noting hydraulic jacks have been around for a long time. As

such, he came at the concept with a fresh perspective. McCarthy had never worked in oilfield maintenance, either.

McCarthy isn't coming at this as a tinkering inventor, but as a professional engineer with a degree in industrial systems engineering from the University of Regina, where he graduated in 2006.

Indeed, he is now part of a family of engineers, as McCarthy's wife, Olga, is an industrial engineer, as are her two parents and sister.

### **PTRC celebrates 20 years**

*Pipeline News* - As the story goes, 20 years ago, then-Saskatchewan Minister of Energy and Mines Eldon Lautermilch and Ralph Goodale, who was then federal Minister of Natural Resources, were having a smoke in Kirghizstan. Over cigarettes, they decided on the need to push for petroleum research in Saskatchewan.

"This landed squarely on my desk," recalled Dr. Malcolm Wilson back in 2009, then director of the Office of Energy and Environment at the University of Regina. He recalled being told, "Malcolm, create a petroleum research facility."

Thus began the Petroleum Technology Research Centre (PTRC), a not-for-profit research company located in a dedicated building at Innovation Place in Regina, beside the university.

"From nothing in 1998, by 2002 the University of Regina had the largest petroleum engineering program in Canada," Wilson said in 2009. The creation of that program was largely because of funding provided through the PTRC and its public and private sector partners.

In later years (2011 to 2013) Wilson would head up the PTRC, the organization whose purpose is to help figure out how to get as much of Saskatchewan's oil out of the ground as possible, with a particular focus on our billions of barrels of heavy oil.

The PTRC celebrated its 20th year in operation last November.

Most of the PTRC's work has focused on heavy oil, but the use of carbon dioxide for enhanced oil recovery became a key area of research when the Weyburn oil field in southern Saskatchewan began to inject it in 2000 and the resulting Weyburn-Midale Project garnered strong industry interest.

Wilson, who was one of the scientists responsible for the first report from the Intergovernmental Panel on Climate Change (IPCC), knew that using CO<sub>2</sub> for oil recovery was a win-win for Saskatchewan. The IPCC shared the 2007 Nobel Peace Prize with former Vice President Al Gore.

In more recent years, under the direction of new CEO Dan MacLean, the PTRC has turned some of its attention to

light oil, particularly the hard-to-access deposits in the Bakken and Viking formations in southern Saskatchewan.

### **SK injects funds into injection**

*CJME* - The provincial government is looking to keep oil money in Saskatchewan and get even more, with a new incentive program for waterflooding injection wells.

The program would allow oil companies to defer royalties for wells which they convert to waterflooding injection or new such wells that are drilled.

Waterflooding involves injecting water into the well to increase pressure and push more oil out.

The incentive would allow the company to keep the royalties they would be paying the government and use the money for more investment.

It's a royalty deferral for three years – not a reduction or break.

Representatives from a few different oil companies were at the announcement in support of the program.

Jenson Tan is the vice-president of business development at Vermillion Energy. He said the company is excited about the incentive because it's looking to invest \$225 million in light oil assets in southeast Saskatchewan and \$30 million on waterflood and enhanced recovery assets.

Tan called the program a positive action by the province.

According to the provincial government, the program will support \$375 million in new investment over the next five years at maximum uptake. It's also expected to lead to about \$245 million in new provincial royalties over 10 years.

## **ENERGY**

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### **Regina votes to go all renewable**

*CBC Saskatchewan* - Regina city council has voted unanimously in favour of being "100 per cent renewable" by 2050.

That means completely moving away from fossil fuels when it comes to generating power for the city.

City administration has been asked to return to council in 2019 with a proposed framework for becoming 100 per cent renewable.

That will likely include a shift to solar and wind power and electric buses, as suggested by members of council.

Administration will be seeking external funding sources, including grants through the Federation of Canadian Municipalities, to finance the report and future costs of the commitment.





An amendment to the motion, suggested by Bob Hawkins, was passed and with it, administration will have to come up with four possibilities for improving the environmental sustainability of Regina for implementation in 2023.

The provincial government has promised to have 50 per cent of the province's electricity come from renewable resources by 2030. SaskPower recently said it is on track to meet that goal.

The motion that was passed in Regina is the first to set a specific goal on renewable energy.

### Majority support wind

*Swift Current Online* - A new poll outlines that the majority of Saskatchewan residents are in favour of wind energy.

The poll was commissioned by the Canadian Wind Energy Association and carried out by Insigtrix, a market research company.

Results of the poll show that 84 per cent of residents within the province approve government policies that encourage the development of more wind energy production in Saskatchewan.

The poll also outlined that 78 per cent of people who took the poll said that they would support wind farms near their communities.

SaskPower says that the Centennial Wind Power Facility south of Swift Current was the largest operating wind power facility in the country when it opened in 2006 and is graded as a 150-megawatt facility.

As of August 2018, Saskatchewan houses 143 wind turbines, according to SaskPower.

Last September, the Blue Hill Wind Energy Project - a 177-megawatt wind farm - was approved near the town of Herbert, hoping to be constructed in three years' time.

Construction on that project is slated to begin in 2019.

Developing and operating Blue Hill is delegated to the Algonquin Power Company.

## ENVIRONMENT

### U of S finds U.S. water supply smaller

*Science Daily* - The U.S. groundwater supply is smaller than originally thought, according to a new research study.

The study provides important insights into the depths of underground fresh and brackish water in some of the most prominent sedimentary basins across the U.S.

The research by scientists from the University of Saskatchewan, the University of Arizona and the University of California, Santa Barbara was published November 14, 2018 in *Environmental Research Letters*.

Drilling deeper wells may not be a good long-term solution to compensate for increasing demands on groundwater.

The study showed there is potential for contamination of deep fresh and brackish water in areas where the oil and gas industry injects wastewaters into or in close depth proximity to aquifers.

To find out how deep potable groundwater extends, the scientists analyzed water chemistry data from the U.S. Geological Survey for 28 key sedimentary basins in the U.S. and looked at the correlation between water well depths and the depth to the transition between fresh and brackish water.

Until now, the focus has been on monitoring dropping water tables, said lead author Grant Ferguson B.Sc., Ph.D., P.Geo., Eng.L., principal investigator of the University of Saskatchewan-led Global Water Futures project.

The new research found the average depth of transition from fresh to brackish groundwater in the U.S. overall is about 1,800 feet, which contradicts previous studies suggesting that fresh groundwater extends down to 6,500 feet.

"There are a number of cases where potentially you could go a kilometre or so deep for fresh groundwater, but there are other areas of the United States where maybe a maximum of 200 or 300 metres you would run into saline groundwater - essentially you would be done in terms of water resources," said Ferguson, an associate professor at the University of Saskatchewan.

Based on their findings for the U.S., the authors suggest the amount of fresh groundwater available globally may also be less than previously thought. They note that an estimated more than five billion people live in water-scarce areas, many of which rely on groundwater and where, in some cases, significantly more water has been taken out of a groundwater basin than is coming in.

## SRC defends uranium clean-up



CBC Saskatchewan - The Saskatchewan Research Council (SRC) is defending its work on the cleanup of an abandoned uranium mine in northern Saskatchewan, following Ottawa's claim that the SRC's plans are "not cost-effective" and an estimated cleanup cost that's more than 10 times the original projection.

In 2006, the province and the federal government signed an agreement to split the cost of cleanup for the abandoned Gunnar mine, estimated at the time to be \$24.6 million.

The costs have now ballooned to an estimated \$280 million, of which the province says the federal government has contributed \$1.13 million. The government of Saskatchewan has sued Ottawa to get the rest of the money it says the federal government promised.

In September of 2006, the SRC was asked by the province to work on the Gunnar site and 36 satellite sites. The SRC is now on the ground, beginning the actual cleanup process at Gunnar and some of the satellite sites.

In 1953, employees started moving to the Gunnar mine townsite. Five years later, there were two apartment buildings, 86 homes, a school, a hospital and even a bowling alley and curling rink. The mine supplied refined uranium yellowcake that was an essential ingredient for U.S. atomic weapons.

The mine closed in 1963 and the mill operations closed in 1964.

What's left behind now is a big mess.

It sat from then until the SRC recently started the cleanup. Part of the problem is that in the 1950s and 1960s, regulatory oversight didn't exist the way it does today.

The crews found many contaminants, including hazardous waste, PCBs in transformers, batteries, 25 drums of yellowcake (a type of uranium concentrate powder), a huge inventory of asbestos and tailing ponds.

To date, the province has spent \$125 million cleaning up the mine and its satellite sites. The province said the federal government's \$1.13 million contribution covers Phase 1 of the project.

The federal government highlighted that the original agreement signed in 2006 stated Saskatchewan would manage the project in a timely and cost-effective manner, with no cost overruns. The feds also pointed out that the mine was not regulated by the government of Canada.

## Feds invest in farm GHG mitigation

PoultrySite.com - The Government of Canada announced support for three cutting-edge projects by researchers at the University of Saskatchewan's College of Agriculture and Bioresources, School of Environment and Sustainability and the Global Institute for Water Security, to help the agriculture sector reduce its environmental footprint.

These projects include a \$3.4 million investment through the Agricultural Greenhouse Gases Program, to conduct research into greenhouse gas (GHG) mitigation practices and technologies that can be adopted on the farm.

Studies through this funding include researchers looking at different pasture management practices and testing different mixtures of forage plants to reduce the amount of GHG's released into the air. Another study will help farmers decide on the best options for planting shelterbelts, including both farmyard and field shelterbelts, to reduce GHG emissions. Researchers are also looking at ways to reduce GHG released from water storage reservoirs as part of an overall on-farm water management plan.

## UNIVERSITIES AND RESEARCH

### Halloween coup for eng. students 'tanks' to duct tape

CTV Saskatoon - Engineering students at the University of Saskatchewan learned you can make pretty much anything with some cardboard and duct tape.

A group of friends had planned to go as a group for their annual Engineering Halloween party and with a shared interest in building things one decided they should make the costume themselves.

"It's pretty hard to find a six-person group costume, so he said, 'You know what? I think we all have a common interest in tanks. What if we built a tank and brought it to the party?'" said Ben Cloutier, a civil engineering intern.

So the group paid a visit to their local recycling depot and collected cardboard.

"We kind of know a little bit about how structural design works, so it was just a matter of trying to get the cardboard into shapes where it wouldn't bend and it would be stiff enough to carry the weight," said Alex Pulvermacher, a third-year engineering student.

The six-person costume, a replica German tank, took a couple weeks and about 30 man-hours to make. It weighs about 100 pounds, according to Pulvermacher. The tank is also equipped with a fully functioning air gun.

“It can go pretty far. We shot it and it went a couple hundred yards, so it’s pretty powerful,” said Pulvermacher.

## INFRASTRUCTURE

### **Ironically, Humboldt tribute a highway safety hazard**



*Saskatoon StarPhoenix* - Sixteen people died and another 13 were injured when the Humboldt Bronco’s bus collided with a tractor-trailer north of Tisdale on April 6.

Since then, a makeshift memorial to the victims has sprung up at the intersection. Hockey sticks, messages and other items have been left at the site.

A consulting firm hired by the provincial government to conduct a safety review of the intersection noted that the makeshift memorial at the site will likely draw visitors for decades.

As a result, McElhanney Consulting Services Ltd. engineer Cory Wilson, P.Eng., recommended that “a more permanent installation be considered at a safer location,” set back far enough to protect pedestrians.

In an interview, the RM of Connaught deputy reeve said it made sense for the municipality to offer the site at the corner of Highway 335 and Highway 35, which was formerly occupied by a gas station.

The father of 18-year-old Evan Thomas, who died in the crash, said the parents of players and team personnel have been talking about memorials for some time — and he already has a preference.

The roadside memorial “took on a life of its own” and should not be moved far from its current location, he said. If necessary, the speed limit should be reduced to ensure pedestrians are safe, Scott Thomas said.

“That spot to me is hallowed ground.”

### **SK Engineer advocates water infrastructure**



*Western Producer* - An advocate of developing Saskatchewan’s water resources says the province would do well to access a federal fund and start building water infrastructure.

Wayne Clifton, P.Eng., senior principal at Clifton Associates, said money available through the Disaster Mitigation and Adaptation fund could be used to further develop infrastructure around Lake Diefenbaker.

As a civil engineer for decades, Clifton has watched the climate change and said water management is key to dealing with disasters.

“Science says clearly that the world is warming and that our frequency of precipitation and runoff is much more variable,” he said. “It will require intervention by humankind if we are to preserve and utilize our water resources.”

Lake Diefenbaker’s potential in that adaptation is key, he added.

The province’s agricultural irrigators have long backed expanding their sector and a feasibility study done several years ago pointed to the ability to open up more irrigable land while better serving the Moose Jaw-Regina corridor through an Upper Qu’Appelle conveyance project.

It would take water from the south end of Lake Diefenbaker to Buffalo Pound Lake.

Clifton said irrigation hasn’t expanded much beyond the initial agreement in the 1960s when the Gardiner Dam was built and Lake Diefenbaker formed.

“There’s been no movement on that since,” he said. “We have not exploited it at all on the irrigation side or the agricultural side.”

“It’s expensive but it’s also perpetual,” Clifton said. “Once in place, it becomes a part of the sustainable infrastructure for the economy.”

He added that he has long advocated for investment in water and said it should equal investment in transportation systems.



# Calendar Of Events

## Spring PD Days

February 26, 2019, Lloydminster, SK  
[www.apegs.ca](http://www.apegs.ca)

## CTEL (Centre for Technical and Engineering Leadership) Training

February 28 – March 1, 2019, Regina, SK  
[www.apegs.ca](http://www.apegs.ca)

## Dream Big Engineering & Geoscience Week

March 3 – 9, 2019  
[www.apegs.ca](http://www.apegs.ca)

## SARM Annual Convention

March 11 – 14, 2019, Saskatoon, SK  
[sarm.ca/events/conventions](http://sarm.ca/events/conventions)

## SustainTech Conference 2019 – SEIMA

March 21, 2019, Saskatoon, SK  
[www.seima.sk.ca/](http://www.seima.sk.ca/)

## Online Workshops: The PIEVC Protocol

April 2, 4, 9, 11, and 16, 2019  
[engineerscanada.ca/news-and-events/news](http://engineerscanada.ca/news-and-events/news)

## Law & Ethics Seminar

April 12 – 13, 2019, Saskatoon, SK  
[www.apegs.ca/Portal/Pages/Professional-Practice-Exam](http://www.apegs.ca/Portal/Pages/Professional-Practice-Exam)

## Get to the Point

May 1, 2, 2019, Regina, SK  
[www.apegs.ca](http://www.apegs.ca)

## APEGS Annual Meeting and Professional Development Conference

May 3 – 4, 2019, Regina, SK  
[www.apegs.ca](http://www.apegs.ca)

## GeoConvention 2019

May 13 – 15, 2019, Calgary AB  
[www.geoconvention.com/](http://www.geoconvention.com/)

## Williston Basin Petroleum Conference

May 27 – 29, 2019, Regina, SK  
[wbpc.ca/](http://wbpc.ca/)

## Saskatchewan Oil & Gas Show

June 5 – 6, 2019, Weyburn, SK  
[www.oilshow.ca/events/2019-saskatchewan-oil-gas-show/form](http://www.oilshow.ca/events/2019-saskatchewan-oil-gas-show/form)

## Law & Ethics Seminar

September 27 – 28, 2019, Regina, SK  
[www.apegs.ca/Portal/Pages/Professional-Practice-Exam](http://www.apegs.ca/Portal/Pages/Professional-Practice-Exam)

## Did You Know?



Reading *The Professional Edge* counts as credits for reporting continuing professional development under the Informal Activity category.

Attending conferences also counts as credits under the Informal Activity category.

For more information visit: [apegs.ca](http://apegs.ca)