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THE PROFESSIONAL EDGE

ISSUE 186 • MAY/JUNE 2020

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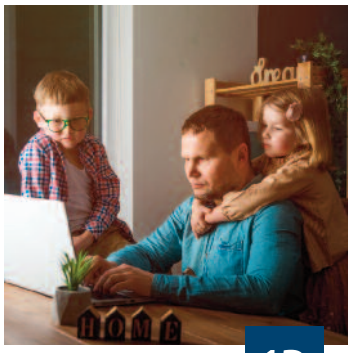


President's Message

Andrew R. Lockwood, P.Eng., FEC

I sit here at my kitchen table attempting to craft my first president's message, all the while stressed about a looming health threat that plagues many: helping kids with their French.

Our mandate as engineers and geoscientists is to protect the public and previewing the topics in this issue, I am filled with pride in my profession, my colleagues and the Association.

Engineers and geoscientists play an integral part in mitigating the fallout from COVID-19. As you will read, we maintain clean air inside buildings, provide stable utilities in the face of massive demographic shifts and provide ethical leadership at all levels of the private and public sector, to name just few examples.

I am excited APEGS has risen to the occasion more times than I can possibly squeeze into these 478 words. Thanks to COVID-19 we have had the "opportunity" to test the first teleconference council meeting, research and implement remote office technologies and shift our governance plan reviews in the span of a month.

I cannot thank the staff and volunteers enough for the flexibility they have displayed in getting used to the new normal and I ask the public and our members to show patience during this time of remote operations and distance meetings.

Even in this topsy-turvy climate, we can still find some amazing things to celebrate. Our annual award winners have been profiled in *The Edge* and their achievements in engineering and geoscience warrant mention. I look forward to our autumn annual meeting where we can celebrate the amazing work they have performed on behalf of our professions.

Big challenges lie ahead, but I am confident in our new 2020-2021 council to make the right decisions that help the public through these tough times. I expect that our upcoming council and executive meetings will focus on how the association can and will respond to emerging regulatory issues associated with COVID-19.

This edition highlights how engineering and geoscience give vast amounts of time and energy to protect the public. To further these ends, I would like to speak to a personal goal for APEGS. Few may know this, but I volunteered for council for a very specific reason: I was curious about the mysterious inner workings of the association.

Once on council, I now better understand why APEGS makes the decisions it does and I want the public and our membership to have the same insight and confidence that I do. If we do a great job describing the "why", I am confident people will trust the "what" when it comes to us acting in the public interest.

P.S. Being stuck at home affords members time to sharpen their tools and gather CPD credits. Check the APEGS website for our second self-paced ethics module, and if you made it this far reading, you can already claim approximately one and a half minutes of informal credits. Woot!

Bug Warrior

Engineer assists Saskatchewan pandemic response

BY MARTIN CHARLTON COMMUNICATIONS

The pandemic rules of living in isolation and going outside only when absolutely necessary are nothing new to Doug Campbell, P.Eng. The Saskatoon biomedical and mechanical engineer spent two weeks in a Mars simulation in Utah. Two metres apart is nothing compared to imagining that you are social distancing 183 million kilometres from the rest of the human race.

Campbell's Mars simulation experience – which included being wary of potential biohazards on the Red Planet – has served him in good stead as the Deputy Planning Chief for the Saskatchewan Health Authority's (SHA) Emergency Operations Center (EOC) after for COVID-19.

Adjusting to the new normal

Before the pandemic, Campbell was the SHA's Director of Strategy and Innovation, a job that entailed leading a team of researchers to develop and analyze "Big Data" to assist health officials in making policy decisions. His current job is much the same in many ways with some important differences.

"We obviously have to do things much faster. Before, we would have followed six-month planning cycles. Now, we have to turn around complete plans in two weeks. Of course, that means making some compromises. As engineers, we are always inclined to keep working until we've found the perfect answer. In the circumstances of the pandemic, we have had to sacrifice absolute perfection in favour of speed."

He and his team have also had to make all the same adaptations as every other workplace as well as those faced by frontline health workers.

COVID-19 Planning- The EOC's planning technology includes this tactile response interactive multi-party display platform, used for brainstorming sessions.

"Our team has had to put in a lot of long days, but we're happy to do it because we understand the importance. In the first two weeks of the crisis, we continued to have some in-person meetings, but since then we've gone to complete virtual meetings, like everyone else. This actually wasn't that big of an adjustment for us since our team is spread out throughout the province, so we always conducted a lot of video-conferences even under normal times."

Self-care at home and at work

Campbell has also shared many of the same challenges as other Saskatchewan residents in adapting to working from home.

"My wife is a teacher and continues to conduct online learning with her students. We have a 15-month-old child, so we have both had to juggle our important professional duties with sharing childcare duties."

The data produced by the planning group has far-reaching implications for the public at large since it guides decisions about access to health services during the pandemic. The stress of participating in these tough decisions, combined with long hours and the effects of isolation, can take their toll on members of the team. Fortunately, the planning group has, true to form, planned for that.

"There is a full working group to assist with psychological safety. The SHA employed pre-screening tools to help our team members assess if stress was getting to them. We hold regular debriefs to help spread the weight of decisions. There are staff supports for mental health. This was one of the first things we took care of when we set up the plan."

Building on past plans

The Emergency Operations Centre did not go into the pandemic planning blind. According to Campbell, the agency had a fully fleshed out plan previously developed to respond to the H1N1 virus.

"Of course, this situation is very different and not everything in that plan has been used. We're learning more day by day about what's necessary and what isn't in a pandemic. But the H1N1 plan gave us an excellent base. The plan for dealing with positive cases worked. The plan for delivery of services has worked out. We continue to tweak things as new data comes in."

If anything, Campbell says, the SHA overplanned for the pandemic, but in a good way.

"The modeling data we put together was very frightening as it showed just how bad things could get very quickly if we did nothing. We saw what was happening in Italy so we wanted to make sure we were prepared if the same things happened here," Campbell says.

"But, because the public was so cooperative and disciplined, there were many of those plans we didn't need to implement. That's a good thing – far better to be overprepared than underprepared."

An example that Campbell cites is the initial plan for field hospitals.

"We were expecting hospitalizations to overwhelm existing hospital capacity, so we had extensive plans in

Virtual Christmas Party - SHA's Strategy and Innovation group were ahead of the curve by using video-conferencing to hold virtual staff parties for team members across the province.

place and materials ready to establish field hospitals throughout the province, in hockey rinks, schools and other locations. As it turns out, thank goodness, we have not needed to execute this plan, but we are ready and fully stocked if things take a turn for the worse."

Backing up people as well as data

Another example where the team was prudently overprepared was the team's plan for operational continuity in case any of their team members were stricken with the virus.

"We developed what we called the '2Deep Personnel Plan' – everyone on the team was responsible for identifying two other people who could do their jobs if they were incapacitated. It was also the employees' responsibility to ensure that their potential replacements were trained and briefed at all times to step into their shoes at a moment's notice."

"For our team, this wasn't as tough as it sounds. We are made up mainly of a number of regional planning heads who have talked constantly amongst themselves throughout the crisis, so in theory any one of the regional heads could have taken on double-duty if another was incapacitated. Here again, we haven't had to activate this plan, but it was reassuring for all of us to know that it was there."

Looking ahead with COVID-19

Campbell's message about the immediate future is consistent with everything that's been stated by government sources.

"We're going to continue to experience physical distancing as a part of our lives for the foreseeable future, until there's herd immunity or a vaccine. We may open a few things up a little, but there's just as much chance things could backslide if there's a new round of infections. Overall, people will have to get used to working from home as much as possible until there is a vaccine."

The role for the professions

For the engineering and geoscience professions, this will mean adjustments, Campbell says.

"We will have to continue to explore ways to work remotely – and maybe that's not such a bad thing, even after the pandemic is passed. Every workplace will have to pay more attention to developing robust employee mental health protocols. All of this is in the wheelhouse of engineers. We're innovators and problem-solvers. The world needs those skills now more than ever. What's more, those skills will help us prepare for a future crisis, whether that's another pandemic or the need for environmental management."

Doug Campbell

The space suit Campbell wore on his Mars simulation mission.

No regrets

One might think that the stress of pandemic planning would make Campbell long for his days on the Mars simulator or make him wish he was actually 183 million kilometres away from problem, but that is not the case.

"Space has always been my dream, but the bottom line is that my team and I are doing our best to help the incredible nurses and physicians in this province save lives. I don't think any of us would wish for an easier job or a different job right now. We're making a difference and we're honoured to do it."

Buffalo Pound: Two thumbs up

Buffalo Pound Water Treatment assures safe, clean drinking water

BY MARTIN CHARLTON COMMUNICATIONS

Water is a crucial element for all living things.

The majority of Canadians have access to clean and safe drinking water, made possible by water treatment plants where raw water is made safe to drink through a series of specialized processes before made available to the public.

But what happens if that water supply is contaminated, say, by a potentially lethal virus like COVID-19?

The Buffalo Pound Water Treatment Plant, commissioned in 1955, is one of the largest, most important and most sensitive components of the province's water infrastructure.

With a rated capacity of 205 million litres per day and supplying safe drinking water to approximately 260,000 customers in Regina and Moose Jaw, the plant is too big to fail.

"We're not only critical, but we're also an essential service. We cannot fail," said Ryan Johnson, P.Eng., general manager at the Buffalo Pound Water Treatment Plant. "We cannot be in a position where we cannot supply water to one quarter of the provincial population."

No COVID-19 in water

Recently, Canadians were alarmed when they learned that nearly 70 employees at a beef processing plant in southeast Alberta tested positive for the coronavirus. This immediately

The possibility of our water supply becoming contaminated with COVID-19 is a non-issue, according to Ryan Johnson, P.Eng., general manager at Buffalo Pound Water Treatment Plant.

prompted concerns over the possibility of contaminated meat reaching the public. The outbreak also raised the question of whether Canada's beef supply would be affected if the plant were to temporarily cease operation.

A similar scenario and subsequent questions were foremost on the minds of Johnson and his staff at the Buffalo Pound facility.

Can our drinking water become contaminated by the coronavirus either organically or through transmission from an infected employee at the water treatment plant?

"We're designed to be able to address bacteria and viruses," Johnson explained. "Based on our treatment processes using UV disinfection as well as free chlorine, we are able to eliminate COVID-19. We know we would never be contributing to the problem. Even if we had COVID-19 coming in on the raw water side, the treatment plant can ensure that on the output side it was not there."

Therefore, Johnson considered the possibility of the water supply becoming infected to be a non-issue.

He said a lab at the plant conducts chemical and microbiological analysis which regularly monitors the quality of the raw and treated water. Because so few people in Saskatchewan contracted the coronavirus, the chances of staff at the plant seeing evidence of it in the water would be next to nothing.

Johnson added that it may be possible to detect the virus in the wastewater in New York City, where more than 162,000 people have contracted the virus. That's more than three times Canada's total.

When water is treated at the Buffalo Pound plant, it goes through multiple processes. First, any large debris is removed from the raw water. From there, chemicals are added to change the electrical charge and density and eventually eliminate approximately 95 per cent of the impurities in the water. The remaining five per cent is run through filters that will remove an additional 4.99 per cent. Addition of chlorine and UV disinfection ensures the water is safe to drink.

Award-winning water

In fact, the work being done at Buffalo Pound has been recognized as among the best in western Canada.

Because the raw water comes to the plant from Buffalo Pound Lake, a shallow and relatively warm body of water, there are taste and odour issues in the summer months. To combat this, the plant in 1985 was one of the pioneers in

Buffalo Pound Water Treatment Plant has won awards for its water quality and ranks among the best in western Canada.

the use of the granular-activated carbon filtration process for the removal of algae-produced taste and odour.

The plant won the Best of the West Water Taste Test in 2014 and 2017 of western Canadian cities for water quality.

Winning these awards is the end result of management and staff at the plant dedicated to the jobs they do so they can take pride in the end result – safe drinking water for the public.

Ahead of the curve

Whether it was suspicion or anticipation, Johnson and staff at the plant in early February felt the coronavirus something much more serious than what was being let on. As such, the timing was ideal to update the plant's business continuity plan.

The plan had been in place for several years and was designed to be applied to a SARS or H1N1 outbreak.

"If we had a work stoppage or a strike or an H1N1 outbreak or something that prevented staff from coming to work, we have to ask ourselves how do we do the job with fewer people," Johnson said. "All of our plans are similar. We would just have to apply it to what is happening at the time."

No staff at the plant has fallen ill over the past few weeks and Johnson has reason to believe it may be because of the preventative measures and lines of defence that were instituted in March. The business continuity plan was updated in February and fully executed in mid-March.

Under normal circumstances, the plant operates around the clock, seven days a week. In total, there are 36 staff that work at the plant. During a regular work week, there are two operators and as many as 24 others on site. Two operators keep the plant running off hours.

These days, however, operational procedures have been altered.

Of the nine operators on staff, two are working at the plant during every shift. Operators are found at two different locations in the plant and are protected (or isolated) from other staff because they work independently in a sealed control room. In order to talk to operators on shift, staff must phone into the control room.

Maintenance and laboratory staff work Monday to Friday. Normally, there are 24 in the plant for each shift. Now, this number has been halved. Johnson said while 12 staff are working at the plant, the remaining 12 are expected to be at home self-isolating and available to come in on short notice.

Taking care of staff

Prior to minimizing staff on site, Johnson and his team tried to mitigate any anxiety felt by staff members by communicating, educating and using as much information as possible to supplement what staff were receiving from other sources. Staff was given a handbook specific to COVID-19 that addressed questions related to new measures being instituted.

In an effort to reduce the chances of staff getting sick, physical distancing measures were introduced. Staff is working independently and doing preventative maintenance duties by minimizing contact with others.

Johnson noted he has a reserve pool of staff members that work from home and retirees on standby.

As well, there is limited access to the plant. Only staff are allowed inside. Johnson said he and his management team are taking a wait-and-see approach before they determine when it is safe for a full complement of staff.

"From the public's perspective, there is almost no change here," he said. "We're still providing potable water in the quantities and quality that is expected by the two cities that own us."

"But we'll definitely have to do a 'lessons-learned' from this process after we return to normal."

Consulting from home:
ACEC-SK adapts to Covid-19

BY MARTIN CHARLTON COMMUNICATIONS

A monetary gift, whether it be substantial or modest, is cause for celebration.

Just ask members of the Association of Consulting Engineering Companies – Saskatchewan. In early May, the Saskatchewan government announced a $2 billion increase in infrastructure investment over two years to assist in economic growth following damage done by the coronavirus pandemic. The investment is a two-year capital plan, with a total investment of $7.5 billion.

This was welcome news for ACEC-Saskatchewan, many of whom were experiencing a sluggish market and some struggling with mental health issues, which highlights the grim reality that some in various sectors were experiencing.

"Some of our members' margins were really tight before (the pandemic). With some of the sites shutting down, the delay in capital projects and word that some municipal projects might not be coming out, there is a lot of stress among senior managers at some of these consulting firms," explained Beverly MacLeod, executive director with ACEC-SK.

"Consulting engineers, if they don't have work, don't get paid."

Which is why the government's announcement should be widely celebrated.

The government package includes the $2.7 billion crown and executive government capital spending from the government's 2020-21 estimate, as well as the $2.8 billion projected for next year.

The government says the increase in investment will help balance the need for smaller, short-term projects to help kick-start the economy and get people back to work.

ACEC-SK members are ready to help deliver capital budgets. It is their work that must come first before construction can proceed.

"The consulting engineering industry is trying to position itself to be available and ready to assist the province with economic resilience and recovery," MacLeod said. "A lot of the design work can be done remotely. That design piece that consulting engineers do is something they can do from home. They have a communication network set up so they can communicate with their teams."

Physical distancing and working from home are among the commonalities accepted during the COVID-19 pandemic.

For members belonging to ACEC-SK, these new adopted means of business have created challenges for routine operations.

"Consulting engineers and geoscientists deal with the public every day. They work in conjunction with other industries to deliver infrastructure and capital projects, things of that nature," MacLeod said.

"Consultants are probably involved with more public exposure than just about any other kind of engineer, public or private. They are dealing with different clients and different teams every day."

Pandemic ethics

With a broad spectrum of clients from the municipal, provincial and private sectors, among others, ACEC-SK

members are responsible for the design specifications of public and private infrastructure projects, including roads and highways, schools and office buildings, technology and industrial facilities.

They provide advice, technical assistance or service to clients on these projects, most often, before a shovel hits the ground for construction.

As expected, consultants engage clients on these work sites. At least they used to before new health and safety guidelines were instituted in March.

"Engineers have sometimes been asked to not enter work sites to conduct field work," MacLeod said. "Instead, there are contractors who use a laptop or GoPro camera for engineers to look at remotely to let them know if construction meets the design specificationss that are provided."

Questions related to professional ethics have spawned. Questions like, 'Does that meet the requirement in its fullest sense?' And, 'Is it efficient enough to protect the public?'

"Is it safer to be on site and view the construction in person, or is it safer to not be on site and rely on technology?"

Additional challenges for ACEC-SK members include transportation to a work site. Can you have more than one person in a truck? Occupational health and safety and public health officials were creative and found ways to mitigate this with the proper personal protection equipment (PPE).

The hunt for PPE and hand sanitizer has been challenging. There also is a need for more portable washrooms on work sites to allow for frequent hand washing.

Be prepared

Was there a plan in place to deal with this almost-immediate pivot in operations?

"Some multi-jurisdictional members who plug in elsewhere did have pandemic plan already in place," MacLeod said. "Perhaps some of the smaller ones may not have. They may have had business continuity plans in place – most of our members do – to be able to access their information and those sorts of things. That actually steps them quite far into the process of being able to work remotely."

Telecommunication services have enabled virtual staff meetings through Zoom and FaceTime and allowed more people to work remotely. Broadband infrastructure has progressed enormously, while the tools have become far more sophisticated. Just when it is needed, the resources are available.

However, that major redistribution of people working from home has created unprecedented stress on network servers.

ACEC-SK members have assisted public engineers at SaskPower and SaskEnergy, among others, should they not have the capacity to manage the additional stress on servers, to maintain a sense of normalcy.

Consultants also have volunteered to assist public engineers with the maintenance of essential services like water, wastewater and power.

"Should a second coronavirus wave happen, consultant engineers are able and ready to assist with the repurposing of capital assets, whether that be for new electrical, new designs, various health needs, those sorts of things," MacLeod added.

Routine business operations have changed over the past few months and new procedures, whether they be interim or permanent, have been adopted. Though change is something that often is viewed in a negative light as it strays from the established normal.

MacLeod's advice to others in the industry is to reflect on this period to see if change has enabled business to run more efficiently.

"While this pandemic is horrendous – the health implications, it has knocked the economy back on its heels – it has also presented some opportunities to do business differently," MacLeod said. "I would encourage the professionals to take a close look at efficiencies and different opportunities for communication and to harness those going forward to assist with the economic recovery."

City of Saskatoon: Adjusting to new normals

BY MARTIN CHARLTON COMMUNICATIONS

Jeff Jorgenson, P.Eng.

The Professional Edge spoke with Jeff Jorgenson, P.Eng., City Manager with the City of Saskatoon, to learn what changes have been implemented during COVID-19.

Q. What effect has COVID-19 had on the City of Saskatoon?

A. As an employer, it involved directing everybody who could work meaningfully from home to do so, as well as introducing new safety protocols, shift changes or different work hours for core services staff who still needed to be out in the field.

Thanks to these efforts, we have played an important part as leaders in our community in helping to reduce the spread of COVID-19.

The COVID-19 pandemic has really challenged us to rethink the way we see our business. How we deliver our work has changed for every single one of us.

Although it has been hard to adjust to new ways of working, I've never been so proud of the way City of Saskatoon employees have responded to this unprecedented situation.

In the long run, I believe our organization will be much stronger and more resilient. We've learned a lot and as a result, we are now better equipped to deal with crises in the future.

Q. How has COVID-19 affected the way you do business?

A. Due to physical distancing requirements, we had to move a large portion of staff to working from home in record time. This would have been unthinkable earlier this year and we did not have a strong work-from-home strategy in place at the time.

From a technology point of view, we were in a good position from having recently implemented Office 365. So, we were able to leverage these best practices, collaborative technologies and tools during the pandemic. The big challenge was the speed at which it needed to happen. Our Information Technology division really rose to the challenge to make that a reality.

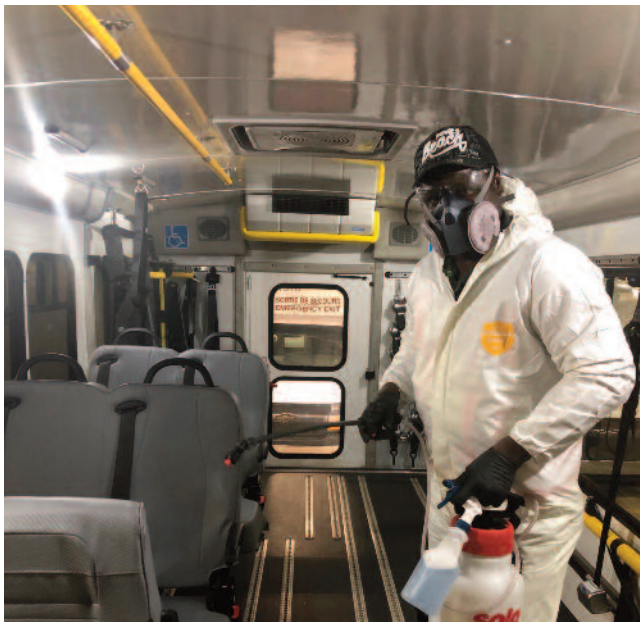
While technology was one challenge, another was facing a steep learning curve for staff, including me, to quickly understand how to use these new methods where they previously hadn't been a part of our day-to-day work.

We conducted our first news conference on Zoom and had it live-streamed to Facebook. We held our first city council meeting on Zoom, while many internal meetings moved to Microsoft Teams. There were a few bumps here and there, but we made it work, just like everyone else.

Regarding maintaining core services:

Much of our core work cannot be carried out by employees working from home. One example is we rely on mechanics to keep vehicles going for water and sewer repair crews. A mechanic can't fix a vehicle from home.

Services such as water, waste, light, power, transportation, fire services, roadways and construction are carried out by staff who still need to report to worksites and be out in the field. These services are essential to the lives of Saskatoon residents and keeping the city moving.



City of Saskatoon

Q. What challenges have you been facing?

A. We must continually reassess the way we deliver services to the public in order to keep staff safe when they are out in the community.

Having to implement increased safety protocols in a rapidly changing situation, communicating important information to managers and supervisors across the corporation was critical. Early on we established a COVID-19 communication framework to make sure information was streamlined and easy to find.

We also had to provide guidance to staff about health and safety considerations for staff working from home.

We needed to be very clear about our expectations for employees when working from home - the need for occupational health and safety requirements that still needed to be followed in order to minimize risks to employees while they work from home, as well as the importance of being aware of support and resources available for mental health and well-being of employees.

In relation to managing the fiscal impact:

With all the changes we've faced to help slow the spread, it's no surprise the COVID-19 pandemic has had a profound effect on the city's finances. To help manage these impacts in a balanced and sustainable way, we developed a comprehensive strategy to mitigate these impacts.

The strategy included a balance of maintaining civic services, reducing expenditures, utilizing fiscal stabilization reserves and continuing to work with other orders of government on solutions.

Q. How have operational changes in your organization impacted the public?

A. The city is doing its part to flatten the curve of COVID-19 cases in Saskatoon. We have made many staffing and service changes so our employees can safely deliver services to residents and make sure people remain physically apart from one another. This way we can all work together by staying apart – it will protect the health of essential frontline health care staff, core service workers and first-responders. These actions in turn protect all of us.

As a municipality, we also needed to think about the long-term impacts and be financially responsible. We felt this was particularly important with so many people and businesses hurting or directly affected. Our approach was to continue to develop strategies to keep as much of our work and responsibilities going as we possibly could.

"We needed to do what we could to keep Saskatoon businesses and our economy going in the short-term and to position us for when we start returning to a more normal operating environment, we're as far ahead as we can possibly be".

Q. Prior to COVID-19, did you have a plan to deal with a pandemic?

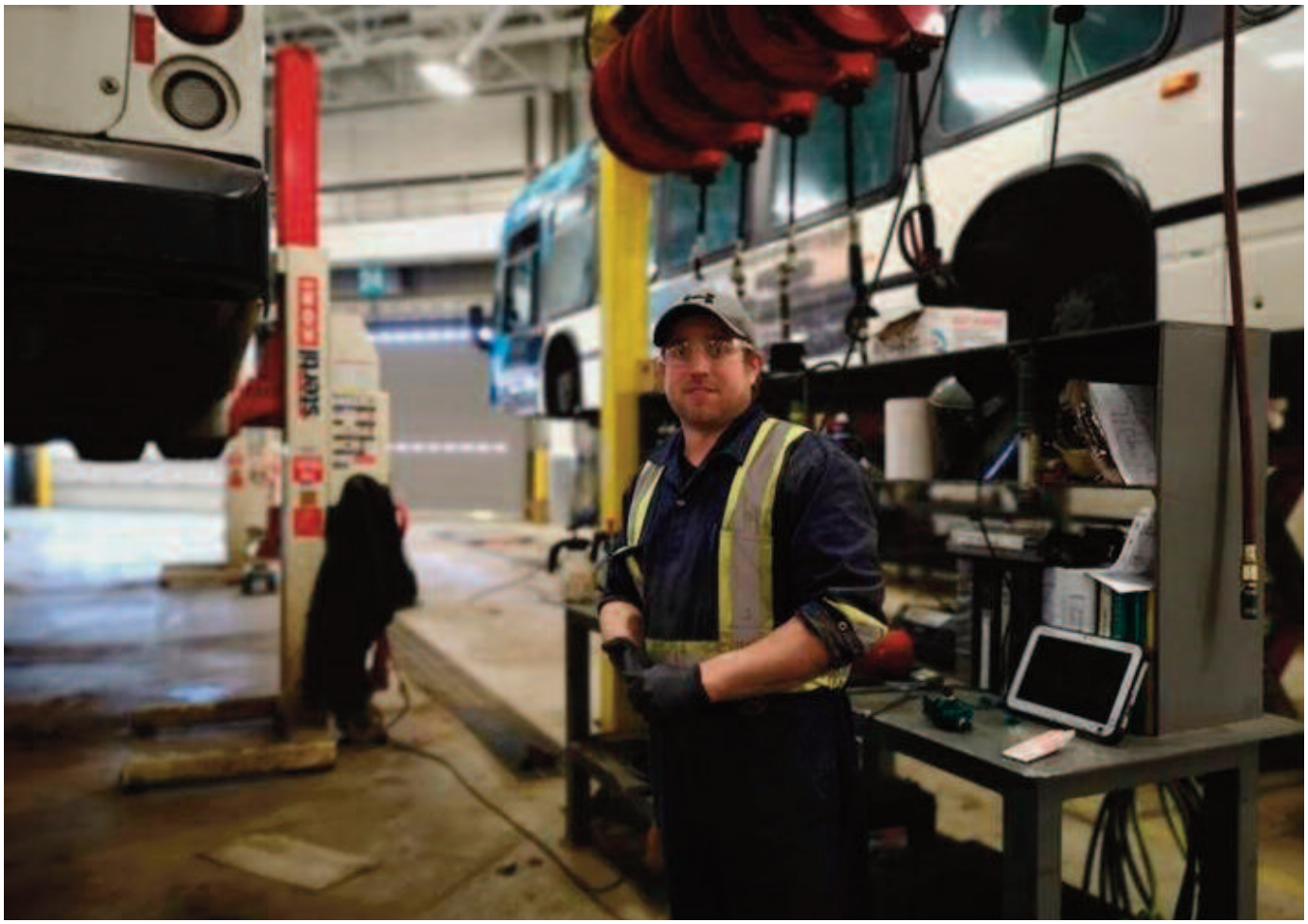
A. The City of Saskatoon has an overall Emergency Management Plan and there is a sub-section of this plan that is for public health emergency or pandemic plan. This plan was originally developed in 2006 and updated in 2009 during the H1N1 pandemic.

Q. What was your plan and has it worked as you expected?

A. Our plan focused on maintaining our core services and the health, safety and well-being of all our employees and residents of Saskatoon. It was developed in partnership with our local health authority and other critical infrastructure partners.

Pandemic response planning typically focuses on ensuring critical services can continue based on the number of staff who are directly impacted or diagnosed with the pandemic disease.

In this case, many more of our staff were impacted by closure of schools, limits on the number of children



City of Saskatoon

City of Saskatoon employees from the transit division work to keep city transit safe and clean for users.

who could be in day-care settings, required self-isolation after travel and the impact on our operations of the recommendations related to physical distancing.

In this pandemic response, more than any other emergency response the City has been involved with, the interdependencies between our internal divisions and our external partners were highlighted.

The City of Saskatoon has strong partnerships with many sectors and these partnerships were essential for a coordinated, collaborative and compassionate response.

Q. What have you needed to change/develop on the fly?

A. There were many adjustments that we had to make quickly and efficiently during the initial impact of COVID-19 on our city. This included working from home, ensuring physical distancing in work locations and adjustment to schedules and work plans.

This would not have been possible without a whole city response plan. Every division in our organization and every employee played an essential role in this response.

No matter what needed to be changed or what new measures implemented our team developed processes, communication plans and a change management strategy to do our best to ensure alignment in an ever-changing environment.

Everyone in our organization adjusted to constant and continual change in the first several weeks of the response.

While our pandemic plan held some of the basic strategies and responses that were implemented it did not consider a highly mobile and closely interdependent society. Our original plan did not contemplate the way the health orders around social distancing were instituted.

In addition, the strain on the supply chain for COVID-19 related safety was underestimated. This required a nimble, responsive and focused approach that considered all current supply chains while continually exploring new options and partnerships.

Member Profile

Tiantian Xia, P.Eng.

This month *The Professional Edge* chats with Tiantian Xia, P.Eng., a mechanical engineer working with SaskPower.

Tell us about your personal and professional background. Where are you from? Where did you attend university?
I was born and raised in Shandong, China. I obtained my engineering bachelor's degree in Wuhan, China in 2010 and then went to the University of Regina for my engineering master's degree in the same year.

Why did you choose to go into engineering?
I've always been good with math and interested in science. When I was young, my mom was an accountant working in a machinery research institute. I enjoyed visiting her workplace to watch the engineers work and design agriculture equipment for farmers. There, I saw engineering make people's lives better and it translated into a lifelong passion.

Did you have any engineers in the family who influenced you?
The one who influenced me most in my family is my husband. He is an electrical and control engineer. We have discussions often on engineering projects. We'll debate what is the best approach to get the job done. He really helps me to stay balanced and encourages me when I encounter roadblocks at work.

What was your first job after university?
I was fortunate to have two co-op work terms when I was at the U of R, which made me obtain basic work skills and experience. In my second co-op work term with SaskPower Transmission and Distribution, I got a chance to be interviewed as an engineer-in-training in the EIT Pool Program and then I started my first job with SaskPower Poplar River Power Station in 2013.

What's your single greatest accomplishment as an engineer?
I've been involved with a lot of innovative projects and it is hard to pick one. When I started working in the power plant, I helped with the procurement and installation of some equipment such as piping parts, valves and pressure vessels. In addition to studying the plant operation system and specifying the equipment, I had to overcome language and cultural barriers and get used to the new working environment. I've learned how to communicate with stakeholders and solve problems. I am so proud of what I have learned and achieved as a plant engineer.

What is one goal you would like to accomplish during your career?
I am now trying to polish my communication, writing and presentation skills and expand my vocabulary.

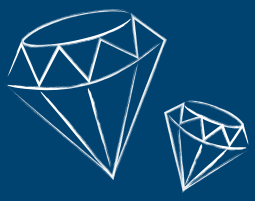
What are your interests outside of work? What do you do for fun?
I enjoy the summer months and do outdoor activities with my kids. I also like doing exercises at home and in the gym to keep fit.

What is your favourite vacation spot? What makes it special?
My favourite vacation spot is always the next one. My husband and I are now trying to travel back to China each year to visit some new cities and places. China has long-running civilizations with its unique and attractive culture which I love most.

What is your favourite book?
I like to read Chinese prose and fiction and my favourite book is called '*Dream of the Red Chamber*' by Cao Xueqin, a Chinese writer in Qing Dynasty. I like it for its rich characters and the depiction of the delicate emotions and it seems so ancient while extremely familiar.

What do you do for continuing professional development?
I am leading some capital projects and providing mechanical support to the power plant, so my CPD is constant in my everyday work. I study technical papers, tool books and standard code when doing design work. Each year I complete a development plan and review with my manager and seek training opportunities that apply to my individual development plan. I also attend the workshops and seminars provided by vendors to learn about the new innovative equipment.

Who has had the greatest influence on your life and career?
One of the greatest influences in my career life is my mentor when I started my first job. He taught me not only lessons from work, but also how to balance family and career. And my parents were always supportive of any decision I made and encourage me to chase my dream and do my best. They also have great influence on my life.



Gems of Geoscience

*In this section of **The Professional Edge**, we learn about geoscientists and their profession through their favourite rocks. For this issue, we asked the current, incoming and outgoing geoscience members of Council, the APEGS national representative to Geoscientists Canada and the one geoscientist staff member to share their favourite rock from anywhere in the world, as well as provide us with a glimpse of some unique geological features from our own province through GeoExplore Saskatchewan.*

GeoExplore Saskatchewan is an interactive map with geological points of interest.

Check it out at apegs.ca under Public\Engineering and Geoscience Week 2020.

Dr. Kevin Ansdell, P.Geo., FGC, FEC (Hon.), Representative to Geoscientists Canada, Professor and Professional Geoscientist

Favourite rock: Purple-banded fluorite (Blue John)

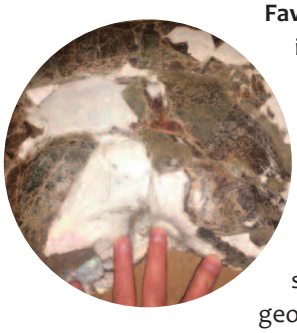
Where I found it: Castleton in the Peak District, close to Sheffield, England where I grew up. Every shop there has an array of samples, jewelry and ornaments.

Why it matters to me: It reminds me of high school field trips and my geology teacher, Peter Kennett — the reason I am geologist. He still does geology outreach in Sheffield.

Favourite feature in GeoExplore Saskatchewan: The Precambrian rocks in the Creighton and Flin Flon area.

Why it's cool: The area's spectacular outcrops attract geologists from all over the world. It has a rich history of mining and it is where I first looked at rocks in Saskatchewan as part of my Ph.D. It's still a mecca for Saskatchewan's young geology students.

Cory Belyk, P.Geo., Councillor (outgoing May 2020), Exploration Geologist



Favourite rock: Ammonite fossil measuring 45 centimetres in diameter with gem-quality red mineralization.

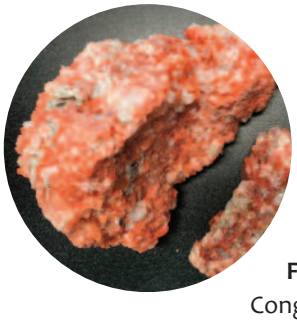
Where I found it: It was on my grandfather's hearth and likely comes from the Bearpaw Formation in Alberta, dating to around 70 million years ago.

Why it matters to me: My grandfather collected rocks, minerals and fossils, and this was one of several specimens that I admired as a child. As an aspiring geologist, I respected its age, beauty and rareness.

Favourite feature in GeoExplore Saskatchewan: Scotty the T. Rex and the Eastend area.

Why it's cool: The T. Rex Discovery Centre is Saskatchewan's own Tyrell-like museum based on an important dinosaur discovery in the Frenchman River Valley, which transects the boundary associated with the extinction of dinosaurs.

Alix Cruickshank, P.Geo., Councillor, Environmental Geoscientist



Favourite rock: Pieces of potash

Where I found it: I collected them while on a tour of the Nutrien Allan Potash Mine. They now sit on display in my office.

Why it matters to me: It is a beautiful rock! Potash is the official mineral of Saskatchewan, which I have now called home for over 10 years.

Favourite feature in GeoExplore Saskatchewan: Conglomerate Cliffs, Cypress Hills.

Why it's cool: The Cypress Hills are the highest point in Saskatchewan and the conglomerate cliffs are a unique sight of ancient gravels turned to solid rock, which now form cliffs providing spectacular views.

Kristen Darr, **P.Geo.,** President-elect, Environmental Geoscientist

Favourite formation: Saskatchewan Landing, where the South Saskatchewan River enters Lake Diefenbaker.

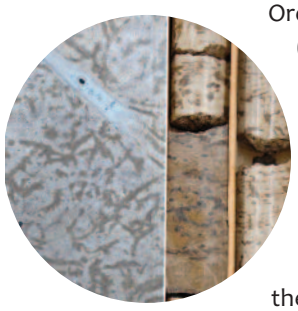
How I found it: I have been going there since I was a baby but did not appreciate its beauty and geographic features until I was a teen.

Why it matters to me: So many great memories to pass on to my kids: Pure Saskatchewan beauty, the water rising in the spring, the stifling summer heat and the unforgettable sunsets behind the sand hills.

Favourite feature in GeoExplore Saskatchewan: As a geographer, it's the map! I also look forward to checking out the landforms and water drainage sections once complete.

Why it's cool: It highlights so many Saskatchewan features. You are bound to learn something new and explore from there.

Gavin Jensen, **P.Geo.,** Councillor, Petroleum Research Geologist



Favourite rock: Limestone – Ordovician Red River Formation (approximately 450 million years ago).

Where I found it: It is quarried in Manitoba and called Tyndall Stone. It can be found. on numerous Canadian buildings, including the T. C. Douglas building in Regina (pictured left). I also have a limestone core from an oil well near Weyburn, where oil is produced from the same formation (pictured right).

Why it matters to me: It's a rare formation that can produce building materials and host an oil reservoir, 500 kilometres apart! Is there a harder working rock in Canada?

Favourite feature in GeoExplore Saskatchewan: T. Rex Discovery Centre.

Why it's cool: Located in the beautiful Frenchman River Valley, this world class geologic treasure is like no other in Saskatchewan.

Dr. Kate MacLachlan, **P.Geo., FGC, FEC (Hon.),** APEGS Director of Academic Review, Precambrian Geologist

Favourite rock: Precambrian Quartzite

Where I found it: I have mapped these rocks in the Savant-Sturgeon Greenstone Belt, Ont., the Yellowknife Greenstone Belt, NWT and the Hickson Lake Assemblage in northern Saskatchewan.

Why it matters to me: Quartzite is a distinctive rock type of Precambrian continental cover sequences which mark boundaries between rocks of different age and origin. Archean quartzite commonly contains a chromium-bearing mica called fuchsite, which is a vibrant green colour, making them beautiful as well as geologically significant.

Favourite Saskatchewan feature in GeoExplore: Grasslands National Park (East Block).

Why it's cool: It's a huge but relatively unknown area of badlands in Saskatchewan. I go there every summer with my daughter to experience the peace and beauty and hunt for fossils.

Erin Moss Tressel, **P.Eng, P.Geo.,** Councillor, Geological Engineer

Favourite rock: Small garnets, which were a deep merlot colour.

Where I found it: In my grandfather's rock collection on our family farm.

Why it matters to me: My grandfather was an avid rock collector and he liked to polish rocks. He polished these garnets and I remember making a necklace out of one when I was a child. My kids still use his rock polisher today.

Favourite feature in GeoExplore Saskatchewan: The Precambrian Shield north of Lake Athabasca.

Why it's cool: The rock cliffs, mixed forest, lakes and streams are not what is typically associated with Saskatchewan. Having grown up in the middle of the grain belt in southern Saskatchewan, the geological diversity of our province always amazes me.

Notes from APEGS Council

The APEGS Council held a virtual meeting via MicroSoft Teams on April 3, 2020. The meeting was attended by 18 of 19 councillors and the directors to Engineers Canada and Geoscientists Canada. One additional councillor joined the meeting via teleconference during the voting on proposed bylaw changes. Council will meet on June 11 - 12 via Microsoft Teams.

Council received the following presentations and information items:

- Activity updates from the constituent society liaisons, the ACEC-SK liaison and the 30by30 Champion's Group liaison.
- Continuing Professional Development compliance statistics.
- 2020 communications plan update.
- The Director of Special Projects provided an update on the Governance Project.
- The APEGS Director to Engineers Canada provided a written report and a verbal update on the activities of the national organization.
- The APEGS Director to Geoscientists Canada provided a written report and verbal update on the activities of the national organization.

Council passed motions as follows:

- Approving revisions to the administrative bylaws to allow for postponement of the 2020 Annual Meeting as a result of the COVID-19 pandemic.
- Approving committee and board appointment terms that were to expire after the 2020 Annual Meeting, to take effect after the first meeting of the committee after May 2, 2020.
- Approving the Terms of Reference for the Nominating Criteria Task Group.
- Approving the Terms of Reference for an Inclusivity Champion.
- Approving the continued membership with PNWER and committing to an annual sponsorship of $5,000 US.
- Approving the 2020 Spring Law & Ethics Seminar in Saskatoon be rescheduled until the fall as a result of the COVID-19 pandemic. There will be two seminars offered (Regina and Saskatoon), assuming group gatherings are permitted.
- Approving the 2020 Spring Principles of Professional Practice Exam be cancelled and those registered be transferred to write in the fall of 2020 as a result of the COVID-19 pandemic, assuming group gatherings are permitted.
- Approving the waiving of the extra fee for alternate arrangement exams for those candidates registered for the spring exam that only have passing the PPE left to be able to apply for professional status or complete their application as a licensee.
- Approving amendments to the Competency Assessment Guide.
- Approving the new building enclosure competency indicators.
- Approving the extension of Malcolm Reeves' term as Chair of the ARC to the end of 2020 to maintain continuity during development of the new ARC process.
- Approving updates to the CPD program document.
- Approving updates to the CPD Variation Approval matrix.
- Approving Life Membership for 27 members.
- Appointing Albert Munro, P.Eng., FEC, FGC (Hon.) as Chair of the Awards Committee.
- Appointing Allison Hillmer, P.Eng. as Chair of the Professional Development Committee.
- Appointing Jodi Derkatch, P.Geo. as Chair of the K-12 Committee.
- Appointing Andrew Loken, P.Eng. to be the University of Saskatchewan Senator for a 3-year term.
- Approving the draft 2019 audited financial statements.

Council noted and received the following reports:

- Registrar's reports for December 2019 (revised), January 2020 and February 2020.
- The unaudited financial statements for December 2019 (restated) and January 2020.
- Executive Committee minutes, board minutes and the reports from the committees and task groups and abridged Investigation Committee minutes.

Results of the 2020 Council Election

Each year, APEGS engages an independent third-party research firm to conduct council elections on the twentieth day before the date fixed by the Council as polling day.

APEGS engaged Insightrix Research Inc. to conduct the 2020 council elections. Insightrix issued ballots on March 30, 2020 and polling day was on April 20, 2020.

The total number of votes cast was 1,875 (1,859 electronic, 16 mail) being 14.8 per cent of the 12,669 total ballots sent out. There was one spoiled ballot.

Council turnover takes place at the APEGS annual meeting, which had been scheduled for Saturday, May 2, 2020. Since the annual meeting was postponed because of the COVID-19 pandemic, Council turnover occurred on Monday, May 4, 2020.

The results of the vote were:

Officers of Council — One-year term

President . . . . . Andrew R. Lockwood, P.Eng., FEC

President-Elect . . . . . Kristen Darr, P.Geo.

Vice-President . . . . . John Desjarlais, P.Eng.

Councillors — Three-year term

Group VI (Chemical, Metallurgical and Ceramic) . . . . . Patricia Lung, P.Eng.

North District . . . . . Ian Farthing, P.Eng.

Southwest District . . . . . Aaron Phoenix, Ph.D., P.Eng., FEC

Geoscience North District . . . . . Alix Cruickshank, P.Geo.

Returning Members of Council

Terry Fonstad, P.Eng., FEC . . . . . Past President

Nicholas Kaminski, P.Eng. . . . . Group I (Civil)

Lesley McGilp, P.Eng. . . . . Group II (Mechanical and Industrial)

Kaylee Tumack, P.Eng. . . . . Group III (Electrical and Engineering Physics)

Erin Moss-Tressel, P.Eng., P.Geo. . . . . Group IV (Geological, Mining, Petroleum, Geophysics and Geoscientists)

Kurtis Doney, P.Eng. . . . . Group V (Agriculture and Forestry)

Danae Lemieux, P.Eng. . . . . Group VII (Environmental)

Nicole Barber, Engineer-in-Training . . . . . Members-in-Training

Jessica Theriault, P.Eng. . . . . South-East District

Gavin Jensen, P.Geo. . . . . Geoscience South District

Dwaine Entner . . . . . Public Appointee

Wendell Patzer . . . . . Public Appointee

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www.apegs.ca/e-edge

Introducing APEGS' New Council Members

PRESIDENT

Andrew (Drew) Lockwood, P.Eng., FEC

UNIVERSITY EDUCATION:
University of Saskatchewan, Bachelor of Science in Mechanical Engineering, 2001.

PRIOR APEGS INVOLVEMENT:
18 years on the Annual Meeting Planning Committee, Audit Committee, Awards Committee, Communication and Public Relations Committee, Licensee Admissions Committee, Nominating Committee, Student Development Committee and most recently, as the President-Elect.

CURRENT EMPLOYMENT:
Owner and principal of Lockwood Consulting.

PERSONAL INTERESTS:
Coaching soccer teams for the community and club leagues, volunteering for the River Heights Community Association and evaluating breakfast cereals.

PRESIDENT-ELECT

Kristen Darr, P.Geo.

UNIVERSITY EDUCATION:
University of Victoria, Bachelor of Science in Geography and Environmental Studies, 2002.

PRIOR APEGS INVOLVEMENT:
Served as the Geoscience South Councillor and was the Vice President for 2019-2020.

CURRENT EMPLOYMENT:
Director, Health, Safety & Environment with SaskEnergy in Regina.

PERSONAL INTERESTS:
Spending time with family and friends, camping, attending Saskatchewan Roughrider games and just being outdoors. She is an avid downhill skier and loves to see her kids excelling in the sport.

VICE PRESIDENT

John Desjarlais, P.Eng.

UNIVERSITY EDUCATION
University of Saskatchewan Edwards School of Business, Master's in Business Administration, 2015, Bachelor of Science in Mechanical Engineering, 2011 and SIAST, Certificate in Radiation and Environmental Monitoring, 2001.

PRIOR APEGS INVOLVEMENT:
K-12 Committee, Professional Development Committee, Equity and Diversity Committee, Indigenous Sub-committee and the North District Councillor.

CURRENT EMPLOYMENT:
General Manager of Great Plains Contracting.

PERSONAL INTERESTS:
Acting as a mentor and role model, serving the community in a variety of capacities, including serving on committees and boards, and most of all, creating everlasting memories with his family through travel and exploration of the world's beauty.

GEOSCIENCE NORTH DISTRICT COUNCILLOR

Alix Cruickshank, P.Geo.

UNIVERSITY EDUCATION:
Brandon University, Bachelor of Science in Environmental Science with a double major in Environmental Science and Geology (Honours), 2009.

PRIOR APEGS INVOLVEMENT:
Member of the Communication and Public Relations Committee; volunteered for various one-time events (annual cardboard boat races in Saskatoon and the *Dream Big* campaign).

CURRENT EMPLOYMENT:
Senior Environmental Geoscientist with Wood Environment & Infrastructure Solutions, Saskatoon.

PERSONAL INTERESTS:
Camping, local festivals and events; board member of SaskEV Society Inc. which focuses on education and advocacy in promoting the adoption of electric vehicles in Saskatchewan.

NORTH DISTRICT COUNCILLOR

Ian Farthing, P.Eng.

UNIVERSITY EDUCATION:

University of Saskatchewan, B.Sc. in Agriculture and Bioresource Engineering, 2010.

PRIOR APEGS INVOLVEMENT:

Past member of the Awards Committee (2012-2018) and Student Development Committee.

CURRENT EMPLOYMENT:

Project Engineer with Associated Engineering, Prince Albert.

PERSONAL INTERESTS:

Volunteering at local events in Prince Albert, golf, curling and helping at the family farm with seeding and harvest.

GROUP VI COUNCILLOR, CHEMICAL, CERAMIC AND METALLURGICAL

Patricia Lung, P.Eng.

UNIVERSITY EDUCATION

University of Alberta, B.Sc. in Chemical Engineering, 1998; University of Saskatchewan, M.Sc. in Agriculture and Bioresource Engineering, 2011.

PRIOR APEGS INVOLVEMENT

Served two terms on K-12 and current member of Equity and Diversity Committee with representation on the Women of APEGS sub-committee.

CURRENT EMPLOYMENT

Public Works and Utilities Manager, City of Humboldt; Active grain producer – Director of Finance for Lung Brothers Partnership, Humboldt and Director with Saskatchewan Flax Development Commission.

PERSONAL INTERESTS

Agriculture, innovation, travel, sports and, as a lifelong learner, passing on the passion for knowledge, exploration and involvement to the next generation. Volunteering as treasurer with the HPS Childcare Centre, Humboldt; member on Cumberland College Ag Advisory Board, Melfort, coach with Saskatchewan Jr. NBA, Humboldt and coach with Humboldt and District Soccer Association.

SOUTH-WEST DISTRICT COUNCILLOR

Aaron Phoenix, P.Eng.

UNIVERSITY EDUCATION

University of Toronto, Bachelor of Applied Science in Chemical Engineering, 1994; University of Calgary, Ph.D. Chemical and Petroleum Engineering, 1998.

PRIOR APEGS INVOLVEMENT

Former member of the Awards Committee, Nominations Committee, University of Saskatchewan representative on the 30 by 30 Champion's Group; current preliminary reviewer for the Academic Review Committee.

CURRENT EMPLOYMENT

1998 – 2016 various positions at the University of Saskatchewan; currently a consultant in engineering education, Swift Current.

PERSONAL INTERESTS

Actively involved in the local church and enjoy canoeing and ballroom dancing.

APEGS' Annual Meeting for 2019

On September 18, 2020, APEGS will be having its annual meeting.

Since we cannot yet determine if a large gathering will be allowed, we are planning an in-person annual meeting in Regina with a back-up plan for a virtual meeting. We will confirm the arrangement over the summer and provide members with notice.

Continuing Professional Development

The Continuing Professional Development (CPD) Program requires APEGS members to complete ongoing professional development activities to maintain and improve their competence. It encourages members to engage in lifelong learning to protect public health, safety and welfare. The program provides tools for members to assess their current skills, knowledge and abilities, determine activities to maintain or enhance them and report completed activities online to APEGS as professional development credits. From more information, navigate to the CPD tab at **apegs.ca**.

Ethics Module #2 Now Live

The next free APEGS online ethics module is now live and covers to topic of Conflict of Interest.

Members are reminded this module is only one option available to members for earning their annual ethics training credit. For more examples of acceptable activities, please refer to Section 3.3 of the CPD Program Document.

Once you have completed your ethics training for the year, remember to log into your online account and manually update your CPD record by checking the "Ethics Training" box.

Remember that your ethics training must be completed on or before December 31, 2020 to qualify for credit for the 2020 reporting cycle.

UPCOMING

Professional Development Events

2020 Fall Professional Development Days
Regina, SK
November 24 – 25, 2020
Registration opens in September.

For details and pricing, visit **apegs.ca**.

Looking for Ethics Training?

Of the many ways to get ethics training, here are two options that APEGS provides:

APEGS Online Ethics Modules

- Obtain your annual ethics credit today by completing one of our free modules.
- The topic for Module 1 is Professionalism and Ethics.
- The topic for Module 2 is Conflict of Interest. This module was launched in April.
- For more information and to access the module, visit **www.apegs.ca**.

In-person Ethics Presentations

If your organization is interested in hosting an ethics training session for your employees or members, contact Jolene Arthur at **cpd@apegs.ca** to book.

Does CPD Apply to Me?

Yes. All APEGS members (except Life Members) are required to participate in the CPD program and update their online CPD records on an annual basis.

Professional development activities can take place anywhere in the world. All members, regardless of their country of residence are required to participate.

Members who report their CPD activities to other associations are still required to report to APEGS annually.

Do you have an Ethics Moment to Share?

APEGS is collecting short ethical moments to create a library. If you have one to share, please email: **cpd@apegs.ca**.

The APEGS CPD Program Reporting Calendar

Members are reminded that if they are an APEGS member for the full year, they have from January 1st to December 31st each year to earn credits. They then have until January 31st of the following year to report all their credits online.

For members that join part-way through the year, only activities that occur between their APEGS membership approval date and December 31st are eligible for credit.

CPD Program Document Update

Council approved amendments to the Continuing Professional Development (CPD) program document at its April 3, 2020 meeting. These changes and updates were made based on feedback received from members and lessons learned during the 2019 launch year of the CPD program to make requirements clearer and to add details on the remediation program. Here's a summary of the changes:

- Clarification that the CPD program applies to all APEGS members, regardless of their country of residence.
- Clarification that involvement in the APEGS CPD Program is required from the time an applicant becomes a member. Activities undertaken prior to being an APEGS member do not qualify.
- Inclusion of requirements for CPD upon reinstatement, aligned with the 9 reinstatement cases described on the APEGS website. Added a new Table 2.
- Clarification and guidance on defining a Scope of Practice.
- Clarification that annual CPD activities are to be completed between January 1 and December 31, but the reporting deadline is January 31 of the following year.
- Clarification on the calculation of pro-rated credits for members that join part way through the year.
- Clarification of credits attainable for post-secondary studies (Formal Activity).
- More examples of what can be included in the various activity categories.
- Inclusion of credits that can be claimed for the publication of a technical textbook (Contribution to Knowledge).
- Correction to Table 4 (now Table 5) - who can check the box "reported elsewhere".
- Clarification on how to bank excess credits and use them in future years.
- Clarification on credit requirements for members on a license waiver for part of the calendar year.
- Addition of sections to describe credit requirements for members working part-time and for members with retroactive fee remissions.
- Provision of more detailed information on the variation application and approval process.
- Addition of a new section that provides details on the remediation program, including an example of a completed form in Appendix G.
- Provision of more details around the CPD review program (compliance and assurance reviews).

The current CPD program document is available at **apegs.ca** on the Continuing Professional Development (CPD) page under the CPD menu.

Your CPD responsibilities during the COVID-19 pandemic

APEGS has been receiving inquiries as to why the CPD program has not been suspended given the COVID-19 situation. The CPD Compliance Committee met March 30 and decided against it because CPD activities were to be completed between January 1 and December 31, 2019 and reporting was to be completed by January 31, 2020, both well before the COVID-19 situation had an impact.

The CPD Compliance Committee also discussed the requirements for 2020 given the pandemic situation. It was decided to not make any changes at this time. There are many online training options available to members, some at reduced rates or for free.

Additionally, a large portion of the CPD program is achieved through professional practice, regardless of whether that practice takes place working from the office, on-site, or remotely from home.

For training opportunities, visit **apegs.ca**:

- Events listing on APEGS' homepage
- Continuing Professional Development (CPD) page under the CPD menum
- Online ethics modules under the CPD menu

Members are also encouraged to research other training opportunities related to their specific CPD plan and scope of practice.

Compliance statistics update

The Continuing Professional Development (CPD) Compliance Committee conducted the second round of CPD compliance reviews for the 2019 reporting year on April 1, 2020. This review revealed an improvement in CPD compliance compared to an earlier review conducted on February 1, 2020:

- 89 per cent of APEGS members reported some CPD data.
- 91 per cent of those APEGS member who reported some data were compliant with the CPD program.
- 81 per cent of APEGS overall membership were compliant with the CPD program in 2019.

The graph below illustrates the reasons for non-compliance identified in the April 1, 2020 reports.

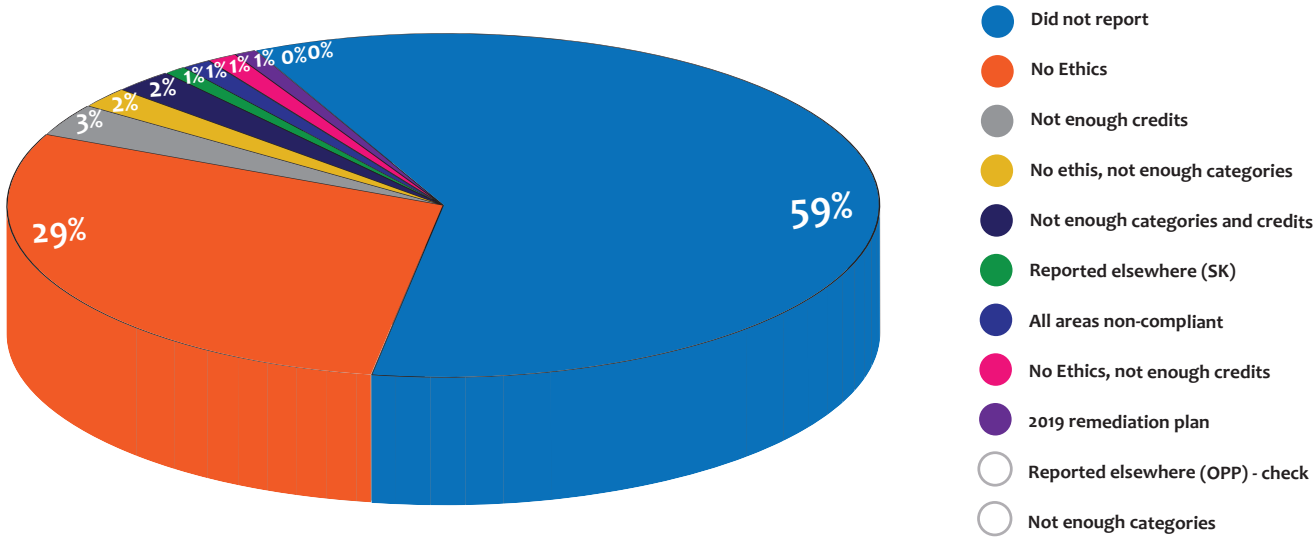
The most common non-compliance category was not reporting any data to APEGS. Remember: all members, except Life Members, are required to report their CPD data to APEGS annually. The timeframe for obtaining CPD credits is January 1 to December 31 with the reporting deadline being January 31 of the following year.

The second most common non-compliance category was not completing the annual verifiable ethics requirement. Remember to check the box AND report the time spent completing this activity under Formal Activity.

There are a number of other reasons why members were non-compliant such as failing to achieve the minimum number of credits or minimum number of credit categories. Refer to the CPD website on the Continuing Professional Development (CPD) page under the CPD menu for all the details of the program requirements and what activities count towards CPD credits.

The final CPD compliance review for 2019 will be conducted in May 2020.

Non-compliant categories - April 1, 2020



APEGS Awards

Dennis K. Paddock, P.Eng., FEC, FCSSE, FCAE, FGC (Hon.)

BRIAN ECKEL DISTINGUISHED SERVICE AWARD

The Distinguished Service Award was created in 1978 to recognize outstanding contributions to the community, the Association and technical and learned societies, as well as to honour distinctive and outstanding achievements in professional and technical fields. In 2004, it was renamed the Brian Eckel Distinguished Service Award to honour the contributions of the late Brian Eckel, a Past-President of the Association. It is an honour given only to those who truly exemplify the best standards in engineering and geoscience in Saskatchewan.

"There is no higher calling in a professional engineering career than public service. It is a chance to make a positive difference in people's lives."

Dennis Paddock began his distinguished 48-year professional engineering career managing innovative projects in transportation and municipal infrastructure for the Saskatchewan Government. In his role as head of northern municipal programs, he worked with engineering consultants to develop and deliver cold-climate water and sewer systems and water and sewer operator training programs in northern Saskatchewan.

He served the profession for 23 years as Executive Director and Registrar of APEGS, guiding the council, volunteers and staff through the revision of *The Engineering Professions Act* to create *The Engineering and Geoscience Professions Act*, assuring that the practice of engineering and geoscience in Saskatchewan remained under one Act.

During his tenure, he guided APEGS' growth from 3,600 to more than 13,000 members. Throughout his career, Paddock volunteered on APEGS committees, was North District Councillor, was their President and Engineers Canada Director and was on two occasions the national CEO Group Chair.

Now retired, he continues serving as Deputy Chief Warden of Kipling Camp #25 and as Vice-President of the Elk Ridge Utility, the non-profit water and sewer utility serving the Hamlet of Elk Ridge. He maintains his passion for self-regulation and the important contributions that engineers make to Canadian life.

Dennis is the proud recipient of the Saskatchewan Centennial Medal (2005), Her Majesty the Queen's Diamond Jubilee Medal (2012) and the Engineers Canada Meritorious Service Award for Professional Service (2019). He has also been awarded Fellowships by Engineers Canada, the Canadian Society for Senior Engineers, the Canadian Academy of Engineering and an honorary Fellowship by Geoscientists Canada.

Dennis and Wendy have two sons, both graduates of the University of Regina. Brett has a Master of Education and Jared is a professional engineer. Dennis and Wendy are the proud parents-in-law to Chrystal and Jeanelle and grandparents to Elizabeth, James, Julia and Jessica. Dennis and Wendy are now enjoying a little more casual time travelling, golfing, fishing and spending time with their family and friends at their Elk Ridge cottage.

APEGS Awards

Dr. James Christoper, P.Geo.

OUTSTANDING ACHIEVEMENT AWARD

The Outstanding Achievement Award was created in 1998 to honour members who show technical excellence and achievement in engineering and/or geoscience in Saskatchewan.

James Christopher was born in Philadelphia, Penn. and raised in Jamaica where he completed secondary school. He now lives in Regina.

On return to the United States, he served in the Army of Occupation in the European Theatre of Operations and completed university training in Ohio. He married there (wife Dora, lately deceased).

James received a bachelor's degree in geology from Columbia University in New York in 1952. He obtained a Masters in Science degree in geology from Ohio State University in 1955 and then a Ph.D in geology four years later, also at Ohio State University.

He was the recipient of academic awards during his schooling, including earning the John Hay Whitney Foundation Fellowship (1955), the John A. Bownocker Scholarship (1956) and was named to the National Science Foundation Pre-doctoral Honor List in 1956.

In 1959, James accepted a job with the Saskatchewan Department of Mineral Resources and accumulated more than 60 years of geological investigations and reports on the sedimentary clastic formations of Saskatchewan and adjacent regions based on data from activities of the petroleum, industrial minerals, hydrologic and academic sectors.

James worked at the Saskatchewan Department of Mineral Resources as a research geologist (1959-67), principal research geologist (1967-75), Chief Sedimentary Geologist and Assistant Director of the Saskatchewan Geological Survey (1975-84) and director (1984-87).

He undertook and supervised regional studies of the sedimentary formations of Saskatchewan with economic potential and produced major reports published by the department for use by the public in general and the resource industry and academia in particular.

He has participated in the organization of international symposia sponsored by the Williston Basin geological societies and the Canadian Society of Petroleum Geologists.

In retirement, he continued as a liaison with federal and interprovincial committees on projects related to the sequestration of CO_2 in subsurface geological formations of Saskatchewan and the mapping of same into North Dakota and Manitoba.

Throughout his career, James has collected several professional memberships. He served on the Issues Board from 2000-05 with the APEGS. As well, he was a member of Sigma Xi - The Scientific Research Society; the Canadian Society of Petroleum Geologists; the American Association of Petroleum Geologists; the Geological Association of Canada; president of the Saskatchewan Geological Society (1967, 1980, emeritus, 1990).

James is the recipient of numerous awards as well. He is a member of the Saskatchewan Petroleum Industry Hall of Fame (1989); Orton Award (1990), Department of Geology, Ohio State University; Canadian Society of Petroleum Geologists Honorary Membership (1997); Saskatchewan Geological Society Honour Roll (2004); Saskatchewan Centennial Medal (2005); Canadian Society of Petroleum Geologists RJW Douglas Medal (2013).

Matthew Dunn, P.Eng.

THE McCANNEL AWARD

The McCannel Award was established in 1983 to honour service to the Association and to the professions as a whole. It is named for Roy McCannel, a founding member of the Association.

Matthew Dunn, P.Eng., is Dene and a member of the Athabasca Chipewyan First Nation.

He grew up in Watrous, SK and in Edmonton, AB. and obtained a bachelor's and master's degree in Mechanical Engineering at the University of Saskatchewan.

Matthew was a student-athlete and competed for the U of S Huskies track and field team in the pentathlon, where he won a silver medal at CIS championships in his final year.

Matthew worked for six years in the mining industry as a mechanical engineer. He led the creation of the Indigenous Peoples Initiatives Community (IPIC) Engineering Access Program in the U of S College of Engineering and currently works as the Indigenization and Reconciliation Coordinator in the U of S office of the Vice Provost Indigenous Engagement.

Matthew was the founding co-chair of the Canadian Indigenous Advisory Council to AISES and previously served as the Chair of Engineers Canada's Equitable Participation in Engineering Committee and Indigenous Peoples Participation in Engineering Working Group.

In 2019, Matthew co-founded the Saskatchewan Professional Chapter of the Canadian Indigenous Science and Engineering Society (sask.caISES) and is currently the Co-President. In this role he co-organized the third annual caISES National Gathering in February 2020, which had more than 170 attendees and was the largest gathering to date.

Matthew is an Indspire laureate, CBC Future 40 winner and lives in Saskatoon with his wife Adrianne and their two young kids.

APEGS Awards

Harpreet Panesar, M.Sc., P.Eng.

EXCEPTIONAL ENGINEERING / GEOSCIENCE PROJECT AWARD

The Exceptional Engineering/Geoscience Project Award was founded in 2001 to recognize accomplishments in engineering and/or geoscience. The project may be located inside or outside the province, but the project team must be comprised predominantly of Saskatchewan engineers and/or geoscientists.

Harpreet Panesar, M.Sc., P.Eng. is currently working as a senior geotechnical engineer with the Government of Saskatchewan. He lives in Regina with his wife Rupi and their two daughters, Prinoor and Rubai.

Prior to joining the Ministry of Highways and Infrastructure, Harpreet worked with a local geotechnical consultant and also as a site engineer for a piling contractor in Dubai.

In 2005, he received his Master's degree in Civil Engineering from the University of Saskatchewan. Harpreet has more than 20 years of work experience specializing in geotechnical and geo-environmental engineering. He has managed several projects involving geohazard assessment and remediation and design and construction of earth works, foundations and containment systems.

Along with providing technical input for major projects (such as Regina Bypass, Warman and Martensville Interchanges, Estevan Bypass, Saskatoon Freeway) he also worked on several Ministry policies', standards and manuals.

His efforts are especially noteworthy in leading the development of the new Foundation Investigation Manual. This manual provides a risk-based approach for project delivery based on project size and technical risks.

It serves as a common reference standard and means of communication for all those involved on geotechnical projects, such as project managers, subject matter experts, designers, technicians, consultants and contractors.

Harpreet continues to volunteer with the Regina Geotechnical Group (local chapter of the Canadian Geotechnical Society) and currently serving as the past chair. He has been instrumental in bringing together the geotechnical industry and reviving the interest in the city.

He envisioned GeoCelebration Event in 2018, which continues to receive strong support from various private and public organizations from all across Canada. "Soil Rocks" Student Competition in 2020 was also his brainchild to increase engineering outreach and community engagement. Additional details for both these events can be found at the following web link **www.GeoCelebration.com**.

Michael Nemeth

ENVIRONMENTAL EXCELLENCE AWARD

The Environmental Excellence Award created in 2005 recognizes exceptional achievements by an individual or team in the application of engineering, geological and/or geophysical methods related to environmental protection and preservation.

Michael Nemeth lives and works in Saskatoon with his wife Shannon Dyck.

Michael has been a mechanical engineering consultant since 2006. He designs heating, cooling and ventilation systems for all types of buildings. In 2013, Michael started Bright Buildings to help others build to the Passive House standard, an international low-energy building standard leading to 90 per cent space-heating energy savings.

Michael and Shannon are co-founders of Radiance Cohousing. The collaborative, eight-unit housing development is designed to meet the Passive House standard and features R60

wall insulation, air-tight construction and excellent ventilation among other sustainability features such as permaculture landscaping and rainwater harvesting.

The homes meet a high standard for occupant comfort and health with the energy efficiency measures providing a lower cost of ownership. Significant carbon emissions will be avoided as a result. A project goal is to achieve affordable, low carbon housing. Roof-top solar has been added, with the goal of making the development net-zero energy on an annual basis.

Michael grew up on a farm near Yellow Creek, Sask., attending school in Wakaw. In 2003, Michael attended the University of Saskatchewan and convocated in 2008. Michael began an internship in 2006 with Daniels Wingerak Engineering Ltd., consulting on heating, cooling, ventilation, plumbing, fire protection design and energy modelling.

Michael delivers Passive House training to building professionals in western Canada as an instructor with Passive House Canada.

Michael is currently the vice-president of the SES Solar Co-operative. He had completed six solar installations and is currently raising funds in a share offering for its seventh and largest installation at CNH Industrial's plant in Saskatoon.

In 2017, Michael received the APEGS Promising Member Award

APEGS Awards

Kai Li, P.Eng.

PROMISING MEMBER AWARD

The Promising Member Award was established in 1995 to recognize exceptional achievements by professional members in the early stages of their careers in Saskatchewan.

Kai Li is a structural engineer with Engcomp in Saskatoon.

Kai was born in a small town in China. His parents wanted him to have the best education possible and decided to send him to study abroad.

In 2008, at the age of 17, he came to Canada by himself as an international student to study at the University of Saskatchewan. After spending nine months in the U of S Language Centre learning English as a second language, he passed the language requirements and began taking university classes in January 2009.

Because Kai knew his parents worked hard to afford his studies in Canada, he didn't want to waste any learning opportunities in university. He worked as a Residence Assistant while living on campus. He took a 16-month internship with the Saskatchewan Ministry of Highways. He volunteered as Peer Assisted Learning mentor and International Peer Leader. He sat on the University Student's Council as an international student representative.

He got on the North Saskatoon Business Association Young Promising Entrepreneur award finalists list with a business plan of exporting lobsters to China. He led the CIM Saskatoon Student Chapter as president. He was part of a student start-up team, which developed a business plan that led to the formation of the Saskatchewan Mining and Industrial Suppliers' Association (SMISA).

In 2013, Kai graduated from the civil engineering program with distinction, as well, he had various extracurricular activities on his resume.

After graduation, Kai started his career with WorleyParsons in Saskatoon. Shortly after signing the contract, he went back to China to marry his high school sweetheart, Cong Pang and brought her to Canada. They had been dating long distance since Kai came to Canada. They now have two beautiful daughters together.

Kai treasures his time with family while still finding time to connect with the community. He actively serves in a local church, which he has been attending for the past 12 years.

He has volunteered with APEGS, ACEC-SK, Canadian Society for Civil Engineering and Saskatoon Engineering Society (SES). As the current president of SES, he developed a website called saskatoontechnicalevents.com aiming to help technical societies coordinate event dates and to offer a single place to find professional development opportunities.

Megan Moore

FRIEND OF THE PROFESSIONS AWARD

The Friend of the Professions Award was created in 2013 to recognize exceptional achievements or unique contributions by a non-member in the promotion of the professions in Saskatchewan.

Megan Moore is the Program Coordinator for the Educating Youth in Engineering and Science (EYES) Program at the University of Regina. EYES operates through the Faculty of Engineering and Applied Sciences and reaches more than 30,000 youth in Saskatchewan each year.

Megan began working with EYES in September 2016, but has been working with youth in science, technology, engineering and mathematics (STEM) programming since May 2013 with Destination Exploration at the University of Lethbridge. Megan graduated from the University of Lethbridge in 2016 with a Bachelor of Arts and Science in Biological Science and Psychology.

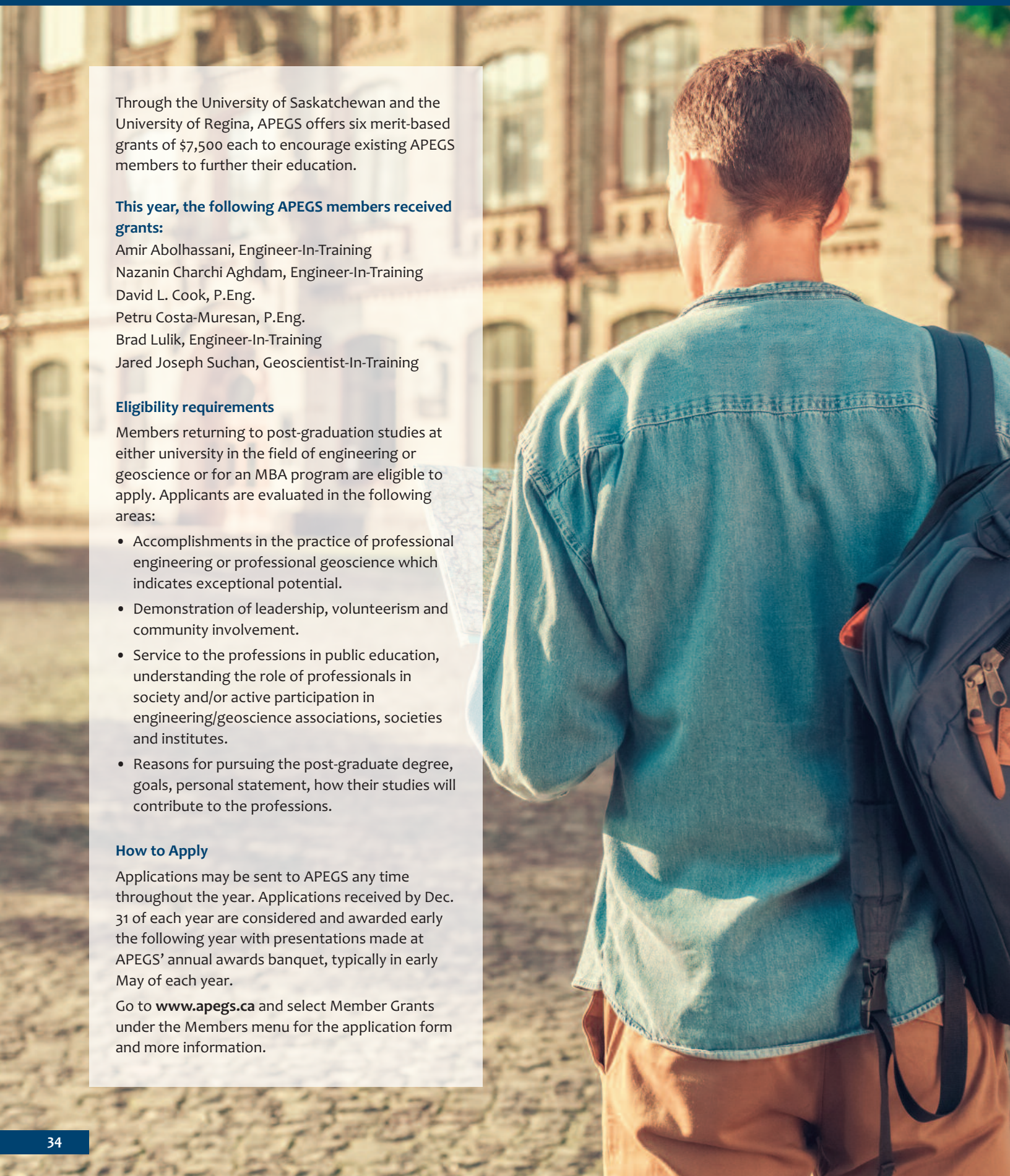
She currently is studying for a Masters of Education in Curriculum and Instruction at the University of Regina. Megan has always had a passion for STEM outreach and education. She volunteered with Let's Talk Science and the Canada Wide Science Fair while she was attending the University of Lethbridge.

Megan is always in search of innovative ways to inspire youth to love STEM as much as she does. There is nothing more exciting for Megan then getting to experience the "a-ha" moment when a youth experiences the wonder of STEM.

Having grown up in a small rural community, Megan is passionate about equitable access for all youth regardless of socio-economic status, gender, sexuality, disability or any non-traditional status that may prevent youth from seeing themselves in STEM.

Megan works tirelessly to build safe spaces for youth and continues to disrupt established STEM spaces. She truly believes that everyone deserves the opportunity to be great and that it is her duty to ensure that EYES is accessible for everyone.

Member Grant Recipients for 2020



Through the University of Saskatchewan and the University of Regina, APEGS offers six merit-based grants of $7,500 each to encourage existing APEGS members to further their education.

This year, the following APEGS members received grants:

Amir Abolhassani, Engineer-In-Training
Nazanin Charchi Aghdam, Engineer-In-Training
David L. Cook, P.Eng.
Petru Costa-Muresan, P.Eng.
Brad Lulik, Engineer-In-Training
Jared Joseph Suchan, Geoscientist-In-Training

Eligibility requirements

Members returning to post-graduation studies at either university in the field of engineering or geoscience or for an MBA program are eligible to apply. Applicants are evaluated in the following areas:

- Accomplishments in the practice of professional engineering or professional geoscience which indicates exceptional potential.
- Demonstration of leadership, volunteerism and community involvement.
- Service to the professions in public education, understanding the role of professionals in society and/or active participation in engineering/geoscience associations, societies and institutes.
- Reasons for pursuing the post-graduate degree, goals, personal statement, how their studies will contribute to the professions.

How to Apply

Applications may be sent to APEGS any time throughout the year. Applications received by Dec. 31 of each year are considered and awarded early the following year with presentations made at APEGS' annual awards banquet, typically in early May of each year.

Go to **www.apegs.ca** and select Member Grants under the Members menu for the application form and more information.

APEGS Governance Review

APEGS Governance Review Completed

In the spring of 2019, APEGS engaged a consultant to review its governance structure and activities. The consultant completed the review and submitted all final recommendations to Council in April.

The consultant interviewed council members, volunteers and staff and considered trends in regulation and the governance structures of other self-regulated professions. The consultant's recommendations include considerations around council composition, nomination process and evaluation of performance, as well as increasing public transparency, increasing APEGS' focus on its regulatory objects and aligning APEGS' public awareness and outreach activities.

"The review of APEGS' activities and structure, combined with the reviews of other Canadian regulators, has provided recommendations as to how APEGS can adopt best practices in professional regulation that enhance public safety and ensure that APEGS is regulating the professions in the public interest," said Bob McDonald, Executive Director and Registrar.

Council is considering each recommendation and has not yet determined what action it may take. APEGS will seek stakeholder consultation where appropriate.

"APEGS has a strong culture of good governance, which includes a drive to look at the changing regulatory landscape and reflect if we are set up properly to best respond to it," said President Andrew Lockwood, P.Eng., FEC. "This governance review and follow-up implementation positions APEGS to continue to regulate in the public interest."

A consultant is expected to be engaged to assist decision-making on any larger changes and to implement any that Council may approve.

"The implementation process may have slowed because of the COVID-19 pandemic, but the steering committee and staff continue to work in the background until more stakeholder input can be obtained," said McDonald.

The estimated start date for implementing any changes is fall of 2020 and it may take two years for some of the changes to be implemented should they be approved. In the meantime, committees will continue with regular operations. For any large and longer-term initiatives in 2020, committees will consult with their respective Board Chairs for direction specific to those initiatives.

"I am confident in the strategy and team we have selected and excited for this renewal over 20 years in the making," said Lockwood.

PURPOSE

Review APEGS' governance structure and activities and make any necessary changes to:

- Create a modernized structure aligned with regulatory responsibilities.
- Increase role clarity.
- Enhance APEGS's ability to plan and prioritize volunteer and staff activities.

RATIONALE

- Growth in membership
- A committee structure carried forward from the late 1980s.
- Changes in APEGS' regulatory environment, including removal of the licence for permission to consult, introduction of a required continuing professional development program and introduction of competency-based experience reporting.
- Provincial governments around the country are making or considering significant changes to the legislation for self-regulated professions.

BACKGROUND

APEGS announced the governance review in the May/June 2019 issue of *The Professional Edge*.

APEGS reported progress on the review in the Sept/Oct 2019 issue of *The Professional Edge*.

The consultant completed the review and submitted all final recommendations to Council in April.

NEXT STEPS

Council will be considering each recommendation.

In the meantime, committees will continue with regular operations.

Steering Committee:

Stormy Holmes, P.Eng., Past President (2019-2020)
Bob McDonald, P.Eng., Executive Director and Registrar
Shawna Argue, P.Eng., Director of Registration
Tina Maki, P.Eng., Director of Special Projects, Project Manager

Questions?

If you have questions, please relay them to the Steering Committee through the Project Manager, Tina Maki, P.Eng.

Engineers Canada reaches agreement

Engineers Canada reaches agreement to transfer ownership of the PIEVC Program to the Institute for Catastrophic Loss Reduction.

On March 30, Engineers Canada and the Institute for Catastrophic Loss Reduction (ICLR) jointly announced that an agreement has been reached for ICLR to assume ownership of Engineers Canada's PIEVC Program, which includes the Protocol for infrastructure climate risk and vulnerability assessment (the "Protocol").

ICLR has partnered with the Climate Risk Institute and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH to operate the PIEVC Program and offer the Protocol in Canada and internationally.

The Protocol is a rigorous, proven process to assess current and future climate risks and vulnerabilities of civil infrastructure and buildings. It was developed and co-funded by Engineers Canada and Natural Resources Canada and has been applied to a wide variety of more than 70 infrastructure projects ranging from single buildings to complete water supply systems in large and small municipalities across Canada.

The Protocol has also been used in Brazil, Costa Rica, Honduras, the Nile Basin and Vietnam.

"Engineers Canada took the decision to divest the PIEVC Program to an entity that would ensure it continues to receive the attention and investments it needs to effectively serve private industry, Indigenous communities and all levels of government as well as interested parties outside of Canada," says Gerard McDonald, Chief Executive Officer of Engineers Canada.

"We are confident that the PIEVC Program is going to a group that recognizes the importance of climate resilience in our critical infrastructure and will ensure that the Program will thrive in the years ahead."

Every year, severe weather causes significant damage and disruption to property and infrastructure - both public and private - across the country and around the world," says Paul Kovacs, Executive Director of ICLR.

"As our climate continues to warm, these impacts will only become more acute, making tools such as the Protocol critical in decision-making processes to make critical infrastructure more resilient. The partnership of ICLR/CRI/GIZ will ensure that the Protocol remains the preeminent tool to ensure that both the existing and the next generation of critical infrastructure is retrofitted/built to handle the climate of the future."

Both ICLR and CRI will partner to manage all aspects of the PIEVC Program as it is used in Canada. GIZ will manage all international uses of the Protocol.

For more information about each organization listed above, visit the news section at **www.apegs.ca**.

March Awareness Week

For Engineering and Geoscience Week, March 1 to 7, APEGS and the Saskatchewan Geological Society introduced GeoExplore Saskatchewan to students and the public. It was featured in the March/April issue of *The Professional Edge*. Here's a recap:

- GeoExplore Saskatchewan is an interactive map with roads and waterways featuring 80 geological points of interest through photos and explanations.
- Thematic pages explain fundamental geological concepts in plain language, including the Avonlea and Big Muddy badlands (with iconic Castle Butte), glacial spillways like Qu'Appelle Valley and rock formations that create waterfalls and cliffs.
- Check it out at apegs.ca under Public\Engineering and Geoscience Week 2020.

While promoting GeoExplore Saskatchewan to students and the public, APEGS aired new radio and online ads with a geoscience focus to raise awareness about what geoscientists do. The new slogan introduced this year, *"Regulating the professions. Protecting the public."*, reinforces APEGS' regulatory mandate to protect the public.

Celebrating Our Own

John Desnoyers-Stewart, MFA, P.Eng.

2019 Engineers Canada - TD Insurance Meloche Monnex Scholarships

At the February 25, 2020 Engineers Canada scholarship presentation ceremony in Ottawa, Ont., APEGS member John Desnoyers-Stewart, MFA, P.Eng. was one of three recipients of the 2019 TD Insurance Meloche Monnex Scholarship.

These scholarships provide financial assistance to engineers returning to university for further study or research in a field other than engineering. The field of study chosen should favour the acquisition of knowledge pertinent to enhancing the performance of the candidate in the engineering profession.

Desnoyers-Stewart is combining his backgrounds in art and engineering to develop mixed-reality experiences that allow for personal expression, social connection and collaborative creativity. In the long-term, he hopes to continue critically engaging with emerging technology, simultaneously seeking to push the boundaries of what is possible while remaining vigilant in exposing its dangers and ensuring it benefits society.

Throughout his work and life, John is a strong advocate for acknowledging the value of other disciplines and enabling collaborations across established boundaries.

"We can learn something from the artist's studio and how their creative practice might inform engineering, enabling increased productivity through a more humanist approach," says Desnoyers-Stewart.

(L to R): David Lynch, Engineers Canada President; Dwayne Gelowitz, P.Eng., FEC., FGC (Hon.), APEGS Director to Engineers Canada; Stephanie Desnoyers; John Desnoyers-Stewart, P.Eng.; Terry Fonstad, PhD., P.Eng., P.Ag., FEC, APEGS President; Andrew Lockwood, P.Eng., FEC, APEGS President-Elect; Bob McDonald P.Eng., FEC, FGC (Hon.), APEGS Executive Director and Registrar.

News Beyond Our Borders

Diversity efforts leads to recognition

Stantec – Stantec, a global architecture, engineering and design firm, was recognized by the American Indian Science and Engineering Society (AISES) as one of the Top 50 STEM Workplaces for Indigenous STEM professionals.

AISES released its listing in the Spring 2020 issue of *Winds of Change*, the organization's national magazine, which focuses on career and educational advancement for Native people in the areas of science, technology, engineering and math (STEM).

Firms selected for the AISES Top 50 list were required to meet a list of criteria that included diversity recruitment efforts, recruiting for jobs in the STEM fields, actively recruiting within Indigenous audiences and sustained support of the AISES mission.

Among companies named to the Top 50 list are those focused on aerospace, civil, electrical and mechanical engineering; biology; ecology; computer science and engineering and mathematics.

Stantec's goal is to have an employee population with a diverse range of talents and perspectives to ensure that the firm has the breadth of viewpoints, experiences and intellectual skills needed to succeed across its global footprint.

Strong growth in postsecondary enrolment continues

Engineers Canada - A new report from Engineers Canada, Canadian Engineers for Tomorrow: Trends in Engineering Enrolment and Degrees Awarded 2014-2018, continues to show strong growth in undergraduate degrees awarded.

In 2018, 18.9 per cent more engineering degrees were awarded than in 2014. In addition, most engineering disciplines have experienced a growth in undergraduate enrolment numbers in the same period.

The proportion of female students enrolled in undergraduate and postgraduate programs, as well as the proportion receiving undergraduate degrees, has reached an all-time high. As of 2018, women comprised 22 per cent of undergraduate students, 26.3 per cent of postgraduate students and 21.1 per cent of undergraduate engineering degrees awarded.

For the fourth consecutive year, Engineers Canada collected data regarding Indigenous students' enrolment and degrees awarded. Indigenous peoples are still greatly underrepresented in engineering education, accounting for only 0.5 per cent of reported undergraduate students. This is approximately 10 times lower than the 4.9 per cent of people in Canada who identify as Indigenous.

Business transforms to help the cause

theweek.com

University of Toronto - Two weeks ago they were making light panels. Today, they're sourcing medical equipment.

The COVID-19 outbreak has led to reports of shortages of life-saving personal protective equipment (PPE) for front-line health workers.

Nanoleaf, a company founded by U of T engineering alumni, signed up to help in providing medical masks, gloves and goggles. To start, Nanoleaf committed to donating 50,000 surgical masks to hospitals in Canada, the U.S. or to the places in need.

The company also is working on fulfilling an order of 1.1 million masks to a hospital in Toronto that will be provided at cost.

Nanoleaf normally manufactures energy-efficient light panels that integrate with smart home assistants such as Siri, Google and Alexa.

Using manufacturing connections in China, Nanoleaf has pivoted its efforts towards sourcing PPE that will then get air freighted to North American hospitals. The company's team in China will also check the quality of the products to ensure they meet federal guidelines in Canada and the U.S.

Certain copper can reduce the spread

http://upnorthlive.com

UBC Engineering - Bacteria and other microorganisms thrive in health care settings, infecting hundreds of millions of patients — and costing health systems billions of dollars — every year.

Now, new research from the University of British Columbia suggests that using certain copper alloys on door handles and other high-contact surfaces in health care facilities could help reduce the spread of two of the most notorious bacterial culprits.

The research team took three different copper alloy-based surfaces, as well as a stainless steel control and subjected them to 365 10-second rounds of cleaning and disinfection. This was done using a device known as the Wiperator, which mechanically rubbed each type of surface with a microfibre cloth that had been presoaked in one of three disinfectants commonly used in hospitals.

The researchers then analyzed each surface for changes in mass, form, structure, roughness and chemical composition — all reflective of the surface's durability — after the year of simulated use. They also assessed the surfaces' ability to kill the bacteria Staphylococcus aureus and Pseudomonas aeruginosa, which are responsible for tens of thousands of health care-associated deaths every year.

The top performer was the integral copper surface: A copper-nickel alloy, it eliminated at least 99.59 per cent of P. aeruginosa and 84.40 per cent of S. aureus within two hours. It was also the most durable of the three surfaces, experiencing the least mass loss and corrosion over the course of the treatment.

The research, published in Biointerphases, was conducted in a lab environment. But the nature, force and frequency of the cleaning and disinfection were designed to simulate real-world methods and the UBC team is currently completing a follow-up clinical study in four hospitals.

Guelph researcher earns international praise

University of Guelph - Drawing attention to Earth's crisis of groundwater contamination and exploitation is the goal of a University of Guelph engineering professor.

Prof. John Cherry, P. Geo., an adjunct professor in U of G's School of Engineering, was named the 2020 winner of the Stockholm Water Prize on UN World Water Day.

Cherry was born in Regina and attended high school there. He later moved to Saskatoon and graduated from the University of Saskatchewan with a bachelor of science degree in geological engineering.

He's the first hydrogeologist and the second Canadian to win the international award, which has gone to academics and organizations worldwide, including the International Water Management Institute in Sri Lanka and Great Britain's Water Aid.

Awarded annually since 1991, the prize honours individuals and organizations whose work helps to conserve and protect water resources.

Cherry has been named a Fellow of the Royal Society of Canada and a Foreign Fellow of the American Academy of Engineering. In 2016, he received the Lee Kuan Yew Water Prize from Singapore for outstanding contributions to global water research.

Hands-free door opener to protect health-care staff

Toronto Star - Ray Taheri touches eight to 10 door handles every day as he walks from his car to his office at the University of British Columbia-Okanagan.

It occurred to Taheri, who teaches engineering design, that health-care workers also make a similar trek from their cars to the hospital. But they are front-line workers in the fight against COVID-19 and need to be protected from the virus as much as possible — whether it comes from patients or door handles.

The coronavirus can live on surfaces for anywhere from a few hours to several days, according to the World Health Organization. And one of the objects people touch most — if they are not quarantined at home — are door handles.

www.themanufacturer.com

After working on various prototypes for several days, Taheri came up with a device that allows the user to open doors, hands free.

The device resembles a wrench that acts as an extension of the user's hand. On one end is a handle the user can grip and on the other is a C-shape curve that hooks the door handle. The device features an ergonomic handle and can hold up to 30 pounds — people can use it to carry groceries or other objects as well.

The device fits most door handle shapes, whether they are flat, cylindrical and whether they are installed vertically or horizontally. It can also be used to push elevator buttons or crosswalk-signal buttons.

Wood fuel could cut coal power emissions

www.foodfirefriends.com

UBC Engineering - Fueling power plants with wood pellets instead of coal could reduce their greenhouse gas emissions by at least 85 per cent, a recent University of British Columbia study found. This is the case even after factoring in emissions caused by producing, storing and shipping the pellets.

Most air pollution is caused by burning coal and a growing number of coal-fired power plants are being converted to run on cleaner fuel. The study suggests that British Columbia, which is rich in untapped forest resources, could provide such fuel in the form of thermochemically pretreated wood pellets.

"Wood pellets are made from forest and sawmill residues — branches, wood chips, sawdust, bark — that would otherwise be burned for safety reasons," says Tony Bi, a professor of chemical and biological engineering at UBC. "Using these pellets as fuel could combat global warming and help countries reach their environmental goals."

To conduct their study, the researchers compared the greenhouse gas emissions and financial costs associated with two types of wood pellets. The first was the conventional pellet, which is minimally processed. The second was the torrefied pellet, which has been subjected to thermal pretreatment under certain conditions. This pretreatment makes them not only more energy-dense than conventional pellets, but also more water-resistant — and therefore easier to transport over long distances.

The benefits would be especially large if the B.C. pellets were shipped to places where strong governmental support for the adoption of biofuels exists, such as the UK, Japan, Belgium and Italy. In B.C., there are still barriers to using the province's full bioenergy potential — and both the province and Canada will likely struggle to meet their emissions reduction targets as a result.

A powerful impact around the world

youube.com

APEGA - From Afghanistan to Kenya and beyond, solar power expert Faruq Vishram, P.Eng., is using his professional engineering skills to empower developing communities in Central Asia and East Africa, paying it forward as a volunteer with the Aga Khan Development Network (AKDN).

Four years ago, on his last night in Bamyan, Afghanistan, Vishram took a drive to see how the lights were working at the city's new hospital, where he had just spent 10 days overseeing the installation of a 1,653-panel solar power plant.

The project's aim was to help reduce the hospital's dependency on expensive and unreliable diesel-generated electricity, while at the same time lowering its carbon footprint.

This was Vishram's first assignment with AKDN.

When it was first commissioned, the solar farm produced

about 60 per cent of the hospital's electricity. At night, though, a diesel generator had to be used when excess solar power ran out.

In recent months, Vishram has worked with the hospital to add 25 per cent more battery storage capacity.

Vishram grew up in a small, rural village in Kenya with no electricity or running water. As a child, he excelled in his studies and was among a select group of students who received scholarships to attend university in England, where he decided to major in electrical engineering.

After graduation, Vishram returned to Kenya, but political unrest in the region forced him and his family to relocate. In 1977, they found a new home in Edmonton.

Providing girls with valuable STEM experience

www.rcinet.ca

Engineers Canada - For several years, Engineers Canada and Girl Guides Canada (GGC) have been working together to spark girls' interest in engineering. In addition to the Engineering Crest Program, which was co-developed by the organizations, GGC have been leaders in introducing girls to STEM activities and learning.

The engineering crest was created by Engineers Canada, in partnership with GGC, to be awarded to Guides who complete engineering-related activities under the supervision of a member of the engineering community.

In 2019, 4,410 Girl Guides across Canada earned Engineers Canada crests. The program continues to grow without any additional promotion from Engineers Canada — word of mouth through the Girl Guides network itself is driving the program at this point, which is an ideal scenario given Engineers Canada's role as a backbone organization.

Much of the program's success can be attributed GGC's larger commitment to STEM teaching. The organization has done extensive research into the pathways to STEM careers and skills for girls under 18 and has looked at how this relates to girls' preparedness for the future of work.

These foundational steps have led to the development of practical resources and programs aimed at keeping the doors open for girls interested in STEM careers.

zoom.us

Can organizations adapt to large virtual meetings?

Engineers Canada - Given the restrictions on travel and social interaction necessitated by COVID-19, 2020 will see the first ever all-virtual Spring Meetings and Annual Meeting of Members for Engineers Canada.

Originally scheduled to take place in Winnipeg, May 23-25, the meetings will now be conducted using GoToWebinar, a virtual platform that can simultaneously accommodate dozens of participants. Along with the navigation of unique technical challenges, this shift is also enabling new possibilities, both at Engineers Canada and beyond.

Engineers Canada is not alone in needing to convert to an online format to conduct large meetings.

Much news coverage has been given to the Canadian House of Commons' recent move to a partially online format, which has brought increased attention both to technical issues and questions of etiquette.

Parliament's use of virtual platform Zoom to conduct meetings has sparked security concerns from some, but the fact that the meetings are public regardless and have been enhanced by recent encryption patches from Zoom, has mitigated the issue to a degree.

In both the public and private sectors, Zoom's rise and security issues suggest that organizations face key questions of how best to balance usability with privacy. A spokesperson for Zoom says that while it has been an exciting time for those who have build the platform, the company has had to ramp up its support quickly because of its burgeoning popularity, "working around the clock to add network capacity and provide support to everyone new to Zoom."

While some organizations have long made use of virtual meetings to conduct international business reliably, the hugely increased scale and volume of virtual meetings in recent months has meant, for many, a rapid, sometimes chaotic adoption of available technologies.

News From The Field

ENERGY

Government to fund energy innovators

Estevan Mercury - The Government of Saskatchewan is providing $658,000 for three Saskatchewan energy innovators through the Saskatchewan Advantage Innovation Fund (SAIF).

SAIF supports commercialization of game-changing technological innovations in the province's core economic sectors.

The three emerging technologies in the energy sector, developed with assistance from the SAIF:

- Ground Effects Environmental Services - $395,000 to support development of a cutting-edge water treatment system for oil extraction that operates on a reduced environmental footprint, removing key containments from wastewater at a fraction of the cost.
- LiEP Energy - $113,000 to support the development, validation and scale-up of a working prototype for new lithium resource extraction technology to pull lithium ions out of concentrated brines faster and using less energy and chemical inputs.
- Wave9 - $150,000 for an oil site monitoring system which uses remote cameras and sensors to feed information into artificial intelligence software and issues alerts through a smartphone app, reducing operating costs and improving worker efficiency.

ENVIRONMENT

Power station closure will affect city

globalnews.ca

CJME - A study commissioned by a City of Estevan committee predicts job loss, population loss and a decline in economic activity after the partial closure of the Boundary Dam power station.

As Canada phases out coal-fired electricity by 2030, units 4 and 5 at the plant are set to close in the next few years.

The Estevan Economic Development board hired MDB Insights to study the effects and it determined the following impact on the city: approximately 150 direct job losses (100 in mining and 50 in utilities); 350 total jobs lost (four to five per cent).

The committee said understanding these impacts is key to figuring out a plan for economic transition.

It calls on provincial and federal leaders to develop a "Centre Of Energy Excellence" in the region, which would include implementing carbon capture and storage technology for Unit 6 of the power station and the Shand Power Station.

This would "ensure employment opportunities in coal mining and power production remain in the area".

The group also calls for the construction of small modular nuclear reactors, along with projects in renewable energy.

Also, the release says all levels of government need to advocate for clean coal technology and for the federal government to introduce a tax credit for carbon dioxide stored.

Environment group plans for nearly 1,000-panel solar array

Global News - The Saskatchewan Environmental Society Solar Co-op announced plans to build a solar panel array — with nearly 1,000 panels — at the CNH Industrial-New Holland site in Saskatoon.

The partnership, said Co-op vice-president Michael Nemeth, P.Eng. would create an array that would yield 375 kilowatts for the plant on 71st Street.

He also said the project works towards fulfilling the Coop's goals of accelerating the use of solar power in Saskatchewan.

To that end, he said the Co-op would organize volunteers to regularly clean the panels to maintain maximum efficiency and to hire professional contractors for any repairs.

Co-op board member Jason Praski said the industrial size of the project was new, but he's still excited to partner with a company that is "taking steps into electric machinery".

The Co-op is currently looking for shareholders and said construction could be completed by the end of the year, pending a mutual agreement to pause the building process if the COVID-19 pandemic continues.

GEOLOGY

Former APEGS president takes on new role

Pipeline News - Steve Halabura, professional geoscientist and past president of the Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) has probably forgotten more about Saskatchewan rocks and geology than most people will ever know. He will now be contributing to *Pipeline News* with a column focusing on the next *"Big Thing."*

As a self-described home-grown Saskatchewan patriot, he wants to contribute to getting this province up and running again, so he has offered to dig through his 'Garage Files' and prepare a series of columns looking at a number of Saskatchewan hosted commodities that might deserve a new look.

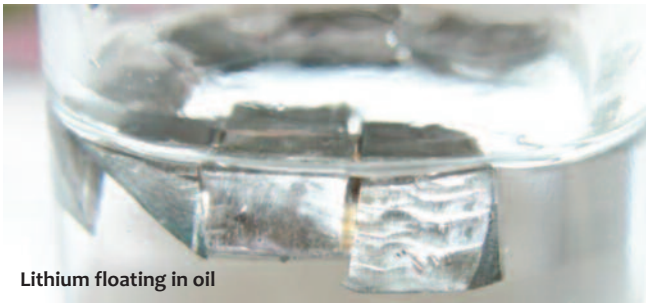
As Halabura said, "I remember $10 oil – March 1986 – and it was brutal. After that experience, I swore to diversify so that my success was no longer dominated by outside forces. Over the next while, I will be examining the question 'what else can our drill bits do?'"

Halabura continues to "geologize" in the helium, potash, aggregates, lithium, light oil (shallow and subsalt), heavy oil and bitumen, geothermal, oil shales and natural gas sectors of this province.

"I've got 40 years of stuff sitting around, and I can't think of a better time to be looking for 'The Next Big Thing,'" he says.

MINING

Mining companies scouring Estevan area



Lithium floating in oil

wikipedia.com

Discover Estevan - Saskatchewan's natural resources have long been a huge part of the provincial economy. Another such resource is coming to the forefront.

The province announced in late April that mining companies purchased land at their Subsurface Mineral Crown Disposition Public Offering. Some of that land was very close to Estevan.

The public offering raised nearly $170,000 in revenue for the province. Mining companies that bought land include Deep Earth Energy Production Corporation, Prairie Lithium Corporation and Sun Valley Land Ltd.

"The subsurface mineral public offering uses a transparent and competitive bidding system to issue subsurface mineral dispositions that grant the holder exploration and development rights for potash and natural mineral salts occurring more than 60 metres below the land surface," read a statement from the provincial government.

"These include boron, calcium, lithium, magnesium, potassium, sodium, bromine, chlorine, fluorine, iodine, nitrogen, phosphorus and sulfur and their compounds."

Sun Valley picked up the biggest plot of land - practically in Estevan's backyard. It bid $30,000 on a 1,656.78-hectare permit block about 18 kilometres southwest of the city. The goal is to find minerals like lithium.

Saskatchewan has seen a significant interest in its lithium potential.

Closure will affect northern Saskatchewan

National Observer - The economic cost of COVID-19 is hitting northern Saskatchewan — causing closures and lost jobs.

Cameco's shutdown of the Cigar Lake mine, combined with that of partner company Orano Canada's McClean Lake mill, are now taking place.

Real and far-reaching impacts of these closures have started to hit home.

Cameco announced in March that the company is temporarily suspending production at Cigar Lake uranium mine and is placing the facility in care and maintenance mode due to the threat posed by the COVID-19 pandemic. Impact on the ground is starting to play out.

Cameco is the biggest publicly traded uranium company in the world and accounted for 18 per cent of production worldwide in 2015. It is also an economic staple for northern Saskatchewan.

Cameco's partner, Orano Canada Inc., simultaneously shuttered its McClean Lake mill where ore from Cigar Lake is processed.

Cameco has ceased commercial ore extraction at Cigar Lake mine. It is moving already extracted material through the remainder of the process.

The total workforce at Cigar Lake is about 320 Cameco employees and another 240 contractors. In care and maintenance mode, the total workforce will drop to about 75, split across two shifts.

All impacted Cameco Cigar Lake employees will continue to receive their regular pay and benefits during the four-week care and maintenance period, but Cameco says it can't speak for the contract workers, since those arrangements would be up to their employers.

The Cameco shutdown also meant closing the partner mill where the ore from Cigar Lake is processed. The workforce at McClean Lake mill is being reduced from 160 to 50 during maintenance.

OIL AND GAS

Government to help oil and gas sector

Global News - The Saskatchewan government announced help for the provincial oil and gas industry.

The measures address administrative issues and did not include any funding.

Deadlines for a series of filings were extended to help the oil and gas industry stabilize while employees transitioned to working from home.

cameco.com

As well, mineral rights which would have expired in 2020 have been extended by one year.

The only measure for which a dollar figure was given was the 50-per-cent reduction of the Oil and Gas Administrative Levy for 2020, with the fee payment delayed until October. The statement said the reduction will save the industry $11.4 million.

Feds commit funding to orphan well cleanup

CTV News - Saskatchewan's energy sector will be receiving a boost from the federal government.

Prime Minister Justin Trudeau announced a $1.7-billion investment into orphan and inactive well cleanup in Saskatchewan, Alberta and B.C.

Saskatchewan has 157 inactive wells, while 2,030 inactive wells were cleaned up in 2019.

An abandoned well is one that has been properly decommissioned in a safe and environmentally benign state. More than 37,000 wells have been successfully abandoned in Saskatchewan.

Premier Scott Moe says the Government of Saskatchewan has been calling for federal funding to clean up inactive oil and gas wells since 2016.

In 2016, then-premier Brad Wall proposed a similar plan to the federal government and estimated that it would create 1,200 jobs in the province.

The federal government also announced it is creating a $750 million emissions reduction fund, which will focus on methane pollution. It will be distributed as a repayable contribution to help businesses maintain their competitiveness, staff and climate targets.

Geothermal company welcomes support

Pipeline News - Deep Earth Energy Corp. (DEEP) says it welcomes the announcement from the Canadian Association of Oilwell Drilling Contractors (CAODC) and its clean energy partners to move forward with a plan to expand geothermal energy in Canada.

thenarwhal.ca

In the midst of this historically impactful oil and gas downturn and the economic consequences from COVID-19, there is a unique opportunity to leverage oil and gas capabilities and technologies into the geothermal sector while preserving jobs and regional economic viability.

If funding was available DEEP would be able to make use of modern oil and gas sector services for test and definition drilling for geothermal energy.

Each well drilled would employ dozens. This would identify more geothermal resources which can quickly be developed and connected to the grid and would utilize otherwise unemployed professionals from the service sector.

Geothermal plays an important part in a diversified Saskatchewan energy mix as the province works towards a cleaner Canadian energy future. The same world-class Canadian drilling technology and expertise that has supported the oil and gas sector can now be deployed for developing clean renewable energy.

Major shutdown on way for oil industry

Weyburn Review - A major glut in the supply of oil led to oil prices tanking into negative territory and the result will be a major shutdown of oil production as the lockdowns for the COVID-19 pandemic have severely cut into consumption.

According to a report by Reuters, a major oil hub in Oklahoma was nearing capacity (about 73 million barrels of crude oil) with more oil on the way. This caused traders to panic and send the oil price crashing to the negative for the first time ever.

This oil hub feeds the major oil refineries on the Gulf Coast, but the world demand for oil and gas products has gone down by at least 30 per cent, causing a major backup in oil supplies, even with the promised cut in production by OPEC recently.

The result is many companies are shutting in production because they can't sell crude oil at this point. Once the restrictions for COVID-19 are lifted, it will take a long time for demand to grow again.

There is a possibility once activity levels start returning to normal and demand rises again for oil and gas, the price of gas could spike because it takes time for oil companies to ramp up their activities and get the oil flowing again.

What worries oil producers in Saskatchewan is the question of whether any investors are going to come back to invest in oil production here or take their money elsewhere to a more business-friendly environment.

UNIVERSITIES

U of R Project Day goes digital

Nikolas Lendvoy

TL: Shayan Khan; TR: Nickolas Schmidt; BL: Nikolas Lendvoy; BR: Nicolas Achter. "The Nicks" team designed a mobile ordering service application to bring medical assistance to those in need throughout Regina and other parts of Saskatchewan. The aim of the app is to provide quick turnaround on-demand service.

University of Regina - Every year, fourth-year Faculty of Engineering and Applied Science students at the University of Regina look forward to showcasing their capstone design projects at Engineering Project Day – a lively event attended by local industry representatives and community members.

This year, with social/physical distancing measures in place, faculty members had to be innovative and find new and meaningful ways to engage with their students and evaluate their submissions.

Student groups presented their projects through various multimedia presentation methods, including videos, audio recordings and PowerPoint slides. They also participated in a live Zoom Q & A with faculty members and instructors.

Many of this year's design projects had real-life applications, including a web app that helps students manage classes and grades; a robotic system that helps detect security issues at university residences; and a system that helps with varying degrees of mobility.

A mobile homecare support app was designed in collaboration with industry partner Eden Care Communities to assist people who require homecare.

Petroleum Systems Engineering students addressed key areas of petroleum production in Saskatchewan and throughout Canada.

This year, the top two projects in both the Petroleum Systems Engineering and Industrial Systems Engineering programs will receive the Gospel Nkinanee Prize. The prize includes a $500 award for each team.

In 2019, Gospel Nkinanee, an international student who graduated from the U of R in 2015 with a degree in Petroleum Systems Engineering, passed away due to a medical condition. At the time, he was working toward a second degree in Industrial Systems Engineering at the university.

The winners of the Gospel Nkinanee Prize in Petroleum Systems Engineering are Nicholas Leslie and Mark Hellman for their project, Multilateral Well Design and Performance Analysis for Low Viscosity Heavy Oil Formations and Karim Sobh, Amr Sobh and Aya Mahmoud for their project, Design of An Optimal Thermal Recovery Strategy for An Alberta Heavy Oil Reservoir.

U of S conference aims to increase Indigenous STEM representation

CTV Saskatoon - About 200 Indigenous students, teachers and professionals participated in a science, technology, engineering and math conference at the University of Saskatchewan in late February.

Co-organizer and APEGS vice-president John Desjarlais, who grew up in the Cumberland House and is an engineer, said Saskatchewan needs more Indigenous people in those areas.

"In a province like ours, representation is incredibly poor. About 16 per cent of the population of Saskatchewan is Indigenous, however there's only one or two percent Indigenous people in my profession."

Kindergarten through Grade 12 students as well as post-secondary students and some teachers are learning about STEM fields and careers. Delegates are coming from across Canada and the United States.

This is the first time the conference has been held in Saskatchewan. The idea was modelled after a similar event in the U.S. Two other such conferences have been held in Canada and delegates from Saskatchewan have attended. They wanted to bring the opportunity here and showcase Saskatchewan's strengths in the four disciplines.

Enter the Couch Potato Lab

University of Regina - Given the COVID-19 pandemic, kids and their parents have suddenly been spending a lot more time at home together. Many parents have found themselves trying to juggle working from home with home schooling and keeping the kids meaningfully occupied.

Tom Duffy BSc'20 is excited about the opportunities presented by livestreaming science lessons.

A highly successful University of Regina program that makes science, technology, engineering and math (STEM) accessible and fun has stepped in to give parents a break and keep their kids busy, educated and entertained – all from the comfort of their couch and all for free.

Part of the U of R's Faculty of Engineering and Applied Science, the Educating Youth in Engineering and Sciences (EYES) program launched The Couch Potato Lab – a series of science lessons for kids streamed through YouTube.

EYES is a not-for-profit organization that provides Saskatchewan youth with the opportunity to experience STEM in a fun, hands-on way.

Typically, EYES offers STEM workshops and camps for kids in grades 1-9 across the province, but has adapted its delivery method to suit a free, online format.

Each episode of The Couch Potato Lab features a revolving cast of three scientists – chosen based on expertise – presenting a fun and engaging lesson centred on Saskatchewan curriculum.

Accompanying each lesson is a manual with detailed instructions, a list of items needed and an experiment for the kids to complete on their own – reinforcing what they have learned from the lesson.

If anything is unclear, kids can get their parents to text in or ask questions through the EYES social media pages and have the questions answered by the scientists during the livestream.

Content is designed to be understood at any age and experiments that make use of readily available household items like plastic cups, water and dry cereal. Experiments so far have included dissecting a banana to teach about DNA and finding out what household items will sink or swim to teach about buoyancy.

The lessons take place Tuesdays and Thursdays at 1 p.m., on the EYESYouth YouTube channel and are available for viewing any time after the stream ends.

Visit the EYES website to learn more about The Couch Potato Lab and to see the schedule of free upcoming livestreams.

http://eyes.uregina.ca/

Calendar Of Events

2020 ACEC-SK Annual Golf Tournament
June 05, 2020 at 11:00 AM
Saskatoon SK

LEED Green Associate (GA) Training - Webinar
June 06, 2020

Crucial Conversations Training - Online
June 08, 2020

Crucial Conversations Trainer Certification - Online
June 15, 2020

Leadership and Culture Live Virtual Workshop
June 23, 2020
https://ca.achievecentre.com/workshops/leadership-and-culture-how-to-create-a-workplace-where-people-like-to-work-saskatoon-jun-23-2020/

ASHRAE 2020 Virtual Conference
June 29, 2020

LEED Green Associate (GA) Training - Webinar
July 11, 2020

LEED Green Associate (GA) Training - Webinar
July 29, 2020

Registration Deadline - Fall PPE/Seminar
August 14, 2020

GeoConvention 2020
August 31, 2020, Calgary, AB

90th Annual Meeting, Professional Development Luncheon and Awards Banquet
September 18, 2020, Regina, SK
https://www.apegs.ca/Portal/Pages/event-details-7/85699

Law & Ethics Seminar
September 25-26, 2020
Regina, SK
https://www.apegs.ca/Portal/Pages/event-details-7/86739

Law & Ethics Seminar
October 2-3, 2020
Saskatoon, SK
https://www.apegs.ca/Portal/Pages/event-details-7/86740

Professional Practice Exam
November 7, 2020 at 9:00 AM
Regina & Saskatoon, SK
https://www.apegs.ca/Portal/Pages/eventdetails-7/86741

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 under the Professional Development quick link.

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