

THE PROFESSIONAL



EDGE

ISSUE 159

NOVEMBER/DECEMBER 2015



Continuing Professional Excellence

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President's Report



APEGS President
Margaret Anne Hodges, P.Eng. FEC

On your mark, get set,
go ...

1. Open my desktop browser and go to www.apregs.sk.ca ...
2. Click on Members/On-Line Services and Login at the top right of the page ...
3. I have my registration number and password handy ...
4. Go to My Details | Continuing Professional Excellence ...

Okay:

- I have worked more than 200 days this year, so that's 50 credits;
- I attended the APEGS Annual Meeting Professional Development (PD) Day, so that's four credits
- I have attended three of our sister constituent associations PD days, so that's 18 credits
- I took three one-hour webinars and a day of Sharepoint training, so that's 10 credits;
- I volunteer with my daughter's school, so that's 10 credits;
- I volunteer with APEGS, and that's another 20 credits.

Total: 112 credits...and I'm done, in seven minutes, eight seconds.

That's all it takes to complete your Continuing Professional Excellence (CPE) reporting. I have the minimum 80 credits for the year and the rest can be carried over to next year, if needed.

We all know that we are obligated to maintain professional competency. APEGS has made online reporting easy and accessible to its members. So why are so many of us reluctant to report what we do already, almost without thinking?

At SaskTel we have adopted the ADKAR people change management model. A is for awareness, D for desire, K for knowledge, A for ability, and R for reward. To understand the issues and challenges of changing behaviour you use the model to rate each attribute on a scale of 1 to 5.

In this case, awareness is high (let's say 4), desire is low (1), knowledge and ability 4 (it's easy enough to figure out), and reward (3) (i.e. job well done). So it seems that desire to report is the stumbling block. There are lots of anecdotal reasons why that may be the case: avoidance of what seems like bureaucracy, fear of not accumulating enough credits, the notion that credits are confusing and expensive to obtain.

Are any of these really a good reason? The sad irony is that I spend longer (30-60 minutes) reporting professional development for another professional designation. I do it so I am not forced to rewrite a four-hour exam to get it back.

I encourage you to familiarize yourself with the process and learn more about the CPE in this issue of *The Edge*. As professionals, I think we can afford seven minutes, 20 minutes, or even a whole half-hour once a year to take note of all the work and effort we put into our careers.

It is also to my own benefit to reflect on what my next career step should be. That's what in it for me—and that's the reward!



Something to Brag About?

The January-February
issue of
The Professional Edge
is all about you!

Our annual
Profile in Achievement
Issue will profile
Saskatchewan-based
engineering and geoscience
companies and projects.

If you want your company or
project profiled,
or to recommend one,
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Choose Your Adventure:

Continuing Professional Excellence doesn't have to be dull

BY MARTIN CHARLTON COMMUNICATIONS

Many APEGS members have experienced the recurring dream that they are back in school but are completely unprepared and don't understand anything the teacher is saying. Then they wake up and realize they are actually in a Continuing Professional Excellence workshop.

Most engineers and geoscientists understand that lifelong learning is not just a good idea – it's a duty. But just because it's a duty doesn't mean it has to be difficult.

The APEGS Continuing Professional Excellence (CPE) Program encourages members to accumulate at least 80 credits per year. With one hour of time spent roughly equalling one credit, this amount may sound like a lot, but Shawna Argue, P.Eng. says reaching the minimum might be easier than you think.

“If you think about what you do in professional development and start tracking it, people would be surprised by what they have,” says Argue, who is the APEGS Director of Education and Compliance. “It's easy to accumulate more than the minimum required credit hours.”

As a member of the B.C., Alberta, Saskatchewan and Manitoba associations, Argue knows a thing or two about recording her continuing education credits, and she points out that activities don't necessarily have to be engineering- or geoscience-related to count.

“People are surprised at some of the things that could count,” says Argue. “We leave it up to the individual to decide what they need to do for their own professional and personal development.”

Terry Werbovetski, P.Eng. Chair of the Professional Development Committee, says APEGS is making an effort to offer professional development opportunities on a wider range of topics, including several of the workshops during the fall professional development days: Ethics and technology, media training, and presentation training.

“Right now, we're looking at more of a general slate of topics that would appeal to all the different types of engineers and geoscientists,” says Werbovetski.

But achieving your CPE credits doesn't have to involve just

sitting in workshops. Werbovetski points out that APEGS members can achieve credits doing things they find fun and fulfilling.

Like sports? Coach a team



While he's no longer Coach Terry, in the past Werbovetski has claimed CPE credit in the participation category for coaching his daughter's soccer team.

“It gets me some networking opportunities,” he says. “As a coach, you get to know all the parents.” Some of his players' parents included contractors he worked with in the field. “We meet at the soccer games but also do work together. It improves your networking skills.”

He also notes that you can take lessons from coaching that apply to your workplace.

“It's similar to an office group; you're trying to corral people, and teach skills.”

All that exercise made you hungry? Go for pizza

Constituent societies offer social networking opportunities like bowling, golf tournaments or beer and pizza nights that count toward participation credits because you're interacting with your peers. Werbovetski has claimed credit for working with constituent societies in his discipline. His involvement with the Saskatoon Construction Association - including attending meetings, functions and listening to guest speakers - could also qualify for CPE credit.

Argue says going for lunch can also give you credit depending on the context: In Regina, there's an informal group of women engineers and geoscientists who meet for lunch as a professional network and an opportunity to mentor younger members. These meetings, too, can count toward your totals.

Don't like sports or networking? Get your geek on

“A science fiction conference would count,” says Argue. “We're still representing the profession when we're taking



part in these events. You're promoting the profession when you're interacting in the community in different ways."

Essentially, if you're involved in the wider community and expanding your knowledge, there's likely room in the CPE guidelines for whatever you'd like to study.

Though for many engineers and geoscience professionals, the most interesting topic of all is their own profession, techno-geeks may find their credits easily accounted for through formal or informal study, or through writing articles or making presentations.

Werbovetski says he enjoyed showing off his engineering prowess two years ago when he gave a tour of places around Saskatoon with geotechnical interest, "particularly landslides."

Find your interests

Argue has recorded a lot of different activities as part of her CPE credits. As a swim instructor with an interest in water safety, she got involved with the Lifesaving Society; she was appointed as the vice-president of the Ladies Club at her golf club; and she even sat on an Off Leash Dog Park Committee for the City of Regina.

"For the off-leash dog park, when they found out I was an engineer, I was assigned tasks related to siting, and drainage," she says.

She has done fundraising where she put together a cookbook, applying her project management skills to something completely outside of her profession.

Other ideas include getting involved with church organizations, sitting on boards, making presentations at career fairs and making presentations to kids at schools.

Learn while you earn

"You get credit just for working," says Argue.

If you have a full-time job, you should have no problem earning the maximum 50 credits for professional practice, and then you only have 30 more credits to earn. You can

also earn credit for training you might be taking anyway, such as first aid, transportation of dangerous goods or WHMIS.

Various associations, including APEGS, need volunteers. That type of help can also count toward your CPE credit. Both Argue and Werbovetski have helped out with APEGS. Werbovetski has presented at law and ethics seminars, chaired the Professional Development Committee, and helped with the annual general meeting.

"CPE is the first exposure to maintaining competence," says Werbovetski. "It's in the code of ethics.... Technology is always changing, so you have to keep up with it as a professional and as an engineer or geoscientist. It's an obligation to remain current."

For more information on ways to earn your CPE credits, contact Shawna Argue at the APEGS office at (306) 525-9547 or sargue@apegs.ca or visit www.apegs.ca/Portal/Pages/Continuing-Professional-Excellence

Constituent and Learned Societies in Saskatchewan

- Canadian Geotechnical Society (Regina and Saskatoon Sections)
- Canadian Society of Bioengineering
- Canadian Society for Chemical Engineering
- Canadian Society for Civil Engineering Prairie
- Canadian Society for Mechanical Engineering Western Region
- Canadian Society of Senior Engineers
- Institute of Electrical and Electronics Engineers North Saskatchewan Section
- Institute of Electrical and Electronics Engineers South Saskatchewan Section
- Moose Jaw Engineering Society
- Regina Engineering Society
- Saskatchewan Geological Society
- Saskatoon Engineering Society

... and many others!

Saskatchewan vs. Canada

A comparison of professional development requirements

BY MARTIN CHARLTON COMMUNICATIONS

Shawna Argue wants to change the way APEGS members think about professional development.

“Most people see it as a chore; it’s something else they have to do,” says Argue, the APEGS director of education and compliance.

“They don’t realize how much they’re already doing and they’re not thinking of it as professional development or not writing it down.”

It’s recommended that you record a minimum of 80 credits each year to demonstrate that you’re receiving a suitable level of Continuing Professional Excellence, and with APEGS, up to 50 of those credits can come from your everyday professional practice.

In Saskatchewan, you only need to report your total hours in each category - rather than a detailed report as with other jurisdictions - and if your home association is elsewhere, you can report there instead and indicate that you have reported in your home jurisdiction.

While all members of APEGS are required to take part in Continuing Professional Excellence, they are not required to report. This system makes APEGS one of the few engineering and geoscience associations in Canada with voluntary reporting for professional development.

All but five Canadian engineering and geoscience regulators have mandatory reporting, and while all of the professional development programs are fairly similar, there are a few differences worth noting.

For more information on reporting your CPE credits, contact Shawna Argue at the APEGS office at (306) 525-9547 or sargue@apegs.ca or visit www.apegs.ca/Portal/Pages/Continuing-Professional-Excellence.

Reporting

	MANDATORY	VOLUNTARY
APEGA	✓	
APEGM	✓	
APGO	✓	
OIQ	✓	
PEGNL	✓	
Engineers P.E.I.	✓	
Geoscientists Nova Scotia	✓	
Engineers Nova Scotia	✓	
APEGNB	✓	
APEGS		✓
APEY		✓
NAPEG		✓
APEGBC		✓
OGQ		✓

ASSOCIATION	REPORTING	CATEGORIES & CREDITS						
		RECOMMENDED CREDITS PER YEAR	PROFESSIONAL PRACTICE	FORMAL ACTIVITY	INFORMAL ACTIVITY	PARTICIPATION	PRESENTATIONS	CONTRIBUTIONS TO KNOWLEDGE
ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF SASKATCHEWAN (APEGS)	Voluntary	80 credits per year.	20 hrs. = 1 credit. Max. 50.	1 hr. = 1 credit. Max. 30.	1 hr. = 1 credit. Max. 30.	1 hr. = 1 credit. Max. 10 hrs. community. Max. 20 hrs.	1 hr. prep & delivery = 1 credit. Max. 20.	Varies by type of publication. Max. 30.
ASSOCIATION OF PROFESSIONAL ENGINEERS OF YUKON (APEY)	Voluntary; \$50 penalty for members who choose not to participate.		15 hrs. = 1 PDH					
NORTHWEST TERRITORIES AND NUNAVUT ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS (NAPEG)	Voluntary		15 hrs. = 1 PDH			Max. 30		
ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF B.C. (APEGBC)	Voluntary; participants are "Declared Continuing Pro. Dev. Compliant."		15 hrs. = 1 PDH					
ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF ALBERTA (APEGA)	Mandatory; failure to report can result in being struck from the register.		15 hrs. = 1 PDH					
ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF MANITOBA (APEGM)	Mandatory; failure to report is professional misconduct.		15 hrs. = 1 credit					1 hr. = 1 credit
PROFESSIONAL ENGINEERS ONTARIO		Currently no continuing professional development program, but a task force has been struck to present a report describing the recommended course of action by December 2015						
ASSOCIATION OF PROFESSIONAL GEOSCIENTISTS OF ONTARIO (APGO)	Mandatory; failure to report may lead to a complaint being filed concerning the member.		15 hrs. = 1 CPD hr.					
PROFESSIONAL ENGINEERS AND GEOSCIENTISTS NEWFOUNDLAND AND LABRADOR (PEGNL)	Mandatory; failure to report can result in being struck from the register.		15 hrs. = 1 PDH Max. 50	Max. 40	2 hrs. = 1 PDH	2 hrs. = 1 PDH Max. 15	1 hr. = 5 PDH Prep. Pro. Dev. Plan = 5 PDH	
ENGINEERS P.E.I.	Mandatory; failure to report or meet min. can result in being struck from the register.		Min. 40 PDH per year. Max. 60				1 hr. = 5 PDH	
GEOSCIENTISTS NOVA SCOTIA	Mandatory; reporting required to maintain status as a member in good standing.			Max. 40	2 hrs. = 1 PDH	Max. 20 Max. 30 on behalf of the association	1 hr. = 5 PDH	
ENGINEERS NOVA SCOTIA	Mandatory; failure to report may result in some form of sanction.			Max. 40	2 hrs. = 1 PDH		1 hr. = 5 PDH Prep. Pro. Dev. Plan = 5 PDH	
ASSOCIATION OF PROFESSIONAL ENGINEERS AND GEOSCIENTISTS OF NEW BRUNSWICK (APEGNB)	Mandatory; failure to report constitutes professional misconduct.		Max. 40		2 hrs. = 1 PDH		1 hr. = 2 PDH	

Technical Knowledge and Soft Skills

APEGS fall professional development days deliver a balance

BY MARTIN CHARLTON COMMUNICATIONS

Professional excellence, like life in general, is all about balance. Many APEGS members focus their Continuing Professional Excellence (CPE) efforts on hard-core courses on technical topics but overlook the value of fostering soft skills. This year's APEGS fall professional development days featured a balance between technical workshops and soft skills workshops.

A full day technical workshop on "Integrating Climate Risk into Infrastructure Development" was held Thursday, November 5, and the following day, three soft-skills workshops were held: "Ethics and Technology," "Presentation Training," and "Handling the Media 101."

Ethics and Technology

One of the ethical roles of geoscientists and engineers is that of a steward, a user and developer of information. You likely receive information as part of your work every day - whether that be emails, codes, visuals or designs - which you are expected to protect, use and develop by improving. It's your job to make sure that information isn't misused.

Your role of a steward is an ethical responsibility, one of many ethical roles that professional engineers and geoscientists hold. Ethics is a formal discipline like math or English, but most people never studied it in grade school or high school. (Although APEGS members, to their credit, are required to take a Law and Ethics class to be licensed).

Lisa Moretto with RGI International presented a philosophical approach to ethics at her "Ethics and Technology" workshop at the APEGS fall professional development days. Her goal was to get attendees thinking about how you make choices.

Ethical decisions come from taking out emotions and using reasoning and logic. Moretto notes that technical professionals can excel in ethical decisions because there's

a structure: use precise language, gather objective facts, present all facts and effectively communicate the results.

If you apply ethical decision making to discussions at meetings, your feedback will be more sensitive and meaningful than feedback that comes from a purely emotional standpoint. When you're working in groups or teams, you shouldn't be fighting them; you should be helping them work through the logic and reasoning of the problem — applying good ethical thinking.

Ethics is a skill you can practise, and a workshop like "Ethics and Technology" was a safe place to practise such a skill.

Presentation Training

One of the activity categories for the APEGS CPE program is presentations. For some people, this category is easy. They are natural presenters, and feel comfortable sharing their knowledge with a crowd. Many other people find public speaking to be more of a challenge.

Whether you have a hard time presenting, or you are naturally gifted, there are techniques and tools you can use to make the ordeal easier or improve your skills. During the APEGS fall professional development days, Dan Gold with Martin Charlton Communications aimed to share his tips with workshop attendees, focusing on research and planning, rehearsal, delivery and evaluation.

During the research and planning phase for your presentation, you should answer as many questions about the presentation and the audience as possible. The goal is to be prepared so that you'll be relaxed.

You also need to rehearse, rehearse, rehearse. Even comedians who throw out off-the-cuff jokes and casual comments have actually practised their routine many times in order to give it that seemingly relaxed flair.

A solid delivery is important, too. Always arrive early and ensure you're well-watered and well-fed. If you'll be standing for a long period of time, ensure you're wearing comfortable shoes. Being comfortable will go a long way in keeping you — and therefore your audience — relaxed.

Finally, you should always seek out evaluation. Use feedback forms or record your presentation so that you can improve on weak points. A presentation can and should be used again and again but should also be continuously improved.

Handling the Media 101

Much like giving a good presentation, working with the media is all about being prepared. Martin Charlton Communication's Dan Gold is a broadcast-trained professional communicator, who shared his tips for successfully and confidently interacting with broadcast, digital and print media.

When speaking with the media, you need to research and rehearse. Understand the organization and the interviewer you will be talking to, and where and when the interview will be taking place. It's also important to know that all interview content is edited - and it may not be the interviewer who does the editing - and that your quotes may be used alongside multiple interviewees.

Prepare and practice your key messages beforehand, and think about how you can best deliver your points. For example, answering the question by incorporating the interviewer's question gives reporters content with context. When answering the question, "What is your favourite colour?" replying, "Red," is not as usable as "Red is my favourite colour because..."

Sometimes you can't speak about things, but no comment is not an option. If there is a reason you can't comment, give them that reason. Proper communication is especially important during a crisis. The wrong messaging can cause problems fast. Consider hiring a professional to help manage your messages during a difficult time.

It is possible for media outlets to misquote you, or take your words out of context, and sometimes journalists have a hidden agenda, or they're simply bad at their job. But if you're prepared, you can mitigate these concerns and use the media to your advantage.

Integrating Climate Risk into Infrastructure Development

Climate change is a public concern and Engineers Canada has set out to improve engineering standards, encouraging professionals to take climate risk into consideration with projects they are responsible for.

In order to tackle this coming change head on, they established the Public Infrastructure Engineering Vulnerability Committee. PIEVC has developed and implemented the Infrastructure Climate Risk Protocol, which can be used to define and assess climate risks for public infrastructures.

Engineers Canada brought its one-day protocol training workshop to the APEGs fall professional development days. Attendees learned about historical and projected climate parameters in Saskatchewan that impact civil infrastructures, the principles and applications of infrastructure climate risk assessment, and how to estimate climate risks.

The five-step process provides a step-by-step method to assess risk and to use optional engineering analysis to evaluate the impact of changing climate on infrastructure. The method should be used to create a framework to support good decision making about infrastructure operation, maintenance, planning and development.

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Member Profile



This issue, *The Professional Edge* chats with Tyson Cote, P.Eng. petroleum systems and mechanical engineer with TransGas.

Tell us about your personal background.

I was a farm boy. I grew up on a farm near Moosomin, where I went to school. From there, I went on to the University of Regina.

Why did you choose to go into engineering?

It was a combination of things. Academically, I was strong in math and sciences. At home, Dad was very mechanically minded. We fixed everything ourselves and built a lot of custom stuff so I got that desire to build stuff from my dad.

Did you face any challenges in college?

It seems funny to say now, but adapting to city life was a bit of challenge then. Of course, Regina isn't really that big and it certainly doesn't seem big now that I've lived here but back then, coming off the farm, it was the "big city" to me and felt overwhelming at times. For example, growing up on a farm, I was used to night-time being a time of quiet so I found the noise of the city disconcerting.

What was your first job out of college?

It actually wasn't in engineering. I met my wife in at the Faculty of Engineering. We decided we wanted to put down roots in Regina. She was an environmental engineer and got a job straight out of college with the City of Regina. I was hunting for a petroleum related job and, while I waited to find something, I drove a gravel truck.

Finally, I landed a job in what is now the Ministry of the Economy working in the petroleum royalties group of the petroleum and natural gas division.

That job led me to some other non-engineering work experiences. There was a strike by prison guards and, as an out-of-scope government employee, I was recruited to fill in for two months.

You must have had some interesting experiences at that job.

Definitely. It was really I opening to meet and learn about people who come from tougher social settings. A lot of these guys had done some pretty bad things but when you got to know them they were basically good people who had made bad decisions, often due to the bad circumstances they had been handed in their lives. On the other side of the coin, I also got to meet some RCMP officers and learn about the struggles they face in their jobs.

What do you feel has been your single greatest accomplishment so far as an engineer?

I would say the work I've done with TransGas over the last few years building compressor stations and transportation facilities. In particular, I've been doing tasks related to processing that are niche areas that have required building relationships with a firm that specializes in those areas. Consequently, I've become more of project manager.

I'm also proud of the work we've done at TransGas to develop modular facilities. In the past, we poured a lot of concrete building permanent facilities that had to be abandoned when we were done with them. Now, we're developing facilities that are built around modules so that they can be moved or upgraded more easily.

How about outside of work? What are your hobbies and interests?

My hobbies mirror my work. I'm in the midst of restoring an old truck, trying to recapture some of my experiences with my dad. Also, a co-worker got me into competitive arm-wrestling which is a sport I've found I really enjoy.

What's the secret of winning at arm-wrestling? Is it all strength or is there technique as well?

I would say it's about 50/50. Strength is definitely a factor but you also need to have a good understanding of mechanics and leverage,

which is where my engineer's training comes in handy. You have to have a good balance of strength and technique.

Do you travel much? What is your vacation or destination?

I'm not a big traveller but my wife and I had one memorable road trip driving down the US Midwest through to Louisiana. We were going down to visit a friend in Houston and took a side to New Orleans along the way. One of the things that impressed me most on that trip was the quality of the infrastructure in the US. We think we're doing well in Regina building one bypass but then you get to Texas where it's not unusual to see five-layered overpasses.

If you could have a super-power, what would it be and why?

Super strength - so I could win more arm wrestling matches!

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

For my life, I would definitely have to say my father. Not only did he inspire me about mechanics and building things

but he was also a great role model about the importance of following your passion. When he finished high school, he wanted to become a farmer but Grandpa wanted him to be a professional with a college education and wouldn't give him the farm. Dad ended up studying dentistry and was a practising dentist for 25 years. Then, one day he decided to return to farming. In the midst of the 1980s - which was not a good time to be a farmer - he decided to give up a prosperous career to do what he loved. I've always found that inspiring.

As for my career, I would point to my last boss Doug Boyko, P.Eng. He was a real engineer's engineer. He is very technically minded and spent his whole career in a technical role. Many of those old-school engineers are retiring so I feel lucky that I had the opportunity to appreciate his advice and mentorship. Now, it's going to be up to guys my age to be the gurus so I'm glad Doug was able to pass on some of his experience.

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86th

Annual Meeting and Professional Development Conference

Evolving Professionals

Thursday, May 5

- Evening Welcome Event

Friday, May 6

- Professional Development Streams
- Professional Development Luncheon
- Keynote Address - Jesse Hirsh
- Past Presidents' Dinner
- President's Reception

Saturday, May 7

- Business Meeting
- Partners Program
- Youth Science Day
- Volunteer Luncheon
- APEGS Awards
- Celebrating Excellence in Engineering and Geoscience

Call For Council Nominations

Nominating Committee

The Nominating Committee, chaired by Past President Andrew Loken, P.Eng., FEC, is soliciting names for the positions described below. You may contact staff support to the Nominating Committee, Bob McDonald, at rhmcdonald@apegs.ca to propose the names of potential candidates. Bob may also be reached through the APEGS office in Regina by phone at 306 525-9547 (toll free 1-800-500-9547 North America), or facsimile 306 525-0851.

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

Submission of Nominations

Any five members may nominate over their signatures an eligible nominee for any elective office, except that of President. Such nominations shall be in the hands of the Registrar at least forty-five days before the election is to take place. To meet this requirement, the nominations must be in the APEGS office no later than 5 p.m., Thursday, March 17, 2016, as the election will take place when ballots are counted on Monday May 2, 2016, the “polling day.”

2016 Vacancies & Terms of Office

Officers

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

Group and Electoral District Councillors - to serve three-year term

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

Eligibility for Nomination

- Only members in good standing are eligible for nomination. A person elected to Council may only hold office while a resident of Saskatchewan.
- A person nominated for President-Elect must have served at least one full year (i.e. from the close of business at one annual meeting to the close of business at the next annual meeting) as a member of APEGS Council prior to the date on which they would assume office as President-Elect.
- A person who is nominated as a representative of an electoral group must be classified with the association in that electoral group. The Councillor representing Members-in-Training can complete the term of office after obtaining his or her P.Eng. or P.Geo. status.



Fees for 2016 are due on or before December 31, 2015

Renewal notices have been mailed!

It is the responsibility of members and the official representative for a Certificate of Authorization to make sure contact information is up to date, including your email address.

If you have never used the system before, click on “New password / Forgot password” and follow the instructions. If you have not received your dues notice contact APEGS. Fees are due on or before December 31, 2015 regardless of problems with delivery.

Check your contact information in your On-Line Profile

To check your contact information, log into your OnLine Profile by clicking “Login” in the top right corner on the APEGS home page. If you have never used the system before, click on “New password / Forgot password” and follow the instructions.

Other things that can be done in your OnLine Profile are: all other fee payments, entering Continuing Professional Excellence (CPE) credits, renewing Permission to Consult, managing your email/mail subscriptions and volunteering for APEGS.

What happens if I don't renew?

You would no longer have the privilege of practicing within Saskatchewan or on properties or facilities located in Saskatchewan. Use of title in Saskatchewan is also a privilege of membership.

Members who do not retain their membership in APEGS and/or another Canadian association/ordre will lose coverage under the National Secondary Professional Liability Insurance Program. Also, failure to maintain your membership will result in ineligibility for benefits under the group life insurance program offered through Manulife and Engineers Canada if you have subscribed to this insurance.

What if I am not working in Saskatchewan?

Members who are retired or not working (at anything) in Saskatchewan can retain membership and may be eligible for a waiver of the fees for the annual licence. More information can be obtained from the documentation accompanying the dues notice or from the APEGS office.

What if my membership ceases and I need to reinstate?

Memberships that have ceased are subject to a 15 per cent fee to reinstate in the same calendar year. Members who notify the APEGS office in writing of their intent to resign their membership on or before January 31, 2015 may reinstate their membership and licence during the calendar year without the payment of a reinstatement or application fee. The late payment penalty for the holder of a Certificate of Authorization is 15 per cent of the annual fee.

For reinstatement procedures for subsequent calendar years, see the APEGS website under Apply, Reinstatement.

Eligibility for Life Membership

Members who are 65 years of age and retired are eligible to apply for Life Membership. An application will come with your renewal notice in mid-November. Renewal notices have been mailed! Check your contact information in your On-Line Profile

Volunteer Appreciation Reception



The APEGS Communication & Identity and Professional Development Committees were pleased to host the Volunteer Appreciation Reception at the Willows Golf & Country Club in Saskatoon on November 5, 2015.



All APEGS Volunteers and fall professional development registrants enjoyed an evening of food, drink and networking opportunities. Entertainment included a “mentalist” performing close-up magic, a stand-up comedienne and a jazz quartet.



LutherCare Communities is Seeking Board Members

LutherCare Communities (LCC), a faith-based organization celebrating 60 years of service to the community, is seeking people of various skills to serve on its 12-member board of directors. The function of the board is to provide governance and strategic direction to the organization. LCC has over 1000 residents in its care and over 400 employees.

Board terms are for four years, with terms beginning in September.

Qualifications:

Potential board members do not need to be members of the Lutheran church (ELCIC), but they must be dedicated to LCC's mission of providing excellence in care, shelter, and support in a nurturing Christian environment for all entrusted to our care and to its vision of "Dare to Care: Building healthy, faith-based caring communities."

Board members should have knowledge and skills that would be an asset to LCC.

All board members are subject to a criminal record check.

Application:

Please visit LCC's website at www.luthercare.com for further information. To apply, click on "Board Members Needed" in the "What's New at LutherCare" box in

RESS Honour Pin Ceremony

The Regina Engineering Students' Society, with support from the Faculty of Engineering and Applied Science, held its first annual Honour Pin Ceremony on September 18.

"The ceremony promotes ethical behaviour by students undertaking the journey at the University of Regina of becoming eligible to register as professional engineers," said Nicole Barber, President of the Regina Engineering Students' Society.

"The pin bears an isometric University of Regina Engineering symbol to remind students that their behaviour as a U of R engineering student must reflect the high standards of the profession they have chosen."

APEGS President Margaret-Anne Hodges was pleased to represent the association at this event that was well attended by students, faculty and alumni.



Top: members of the Regina Engineering Students Society.
Bottom: APEGS President Margaret-Anne Hodges, P.Eng. (left) with RESS president Nicole Barber.



2015 Awards of Distinction

The 2015 Association of Consulting Engineering Companies – SK (ACEC-SK) Awards Gala was held October 27 at TCU Place in Saskatoon. Congratulations to all our worthy recipients.



Lieutenant Governor of Saskatchewan Meritorious Achievement Award

Don George, P.Eng.

Don George, P.Eng., accepting the Lieutenant Governor of Saskatchewan Meritorious Achievement Award from Her Honour The Honourable Vaughn Solomon Schofield, S.O.M., S.V.M., Lieutenant Governor of Saskatchewan

Brian Eckel Awards

BUILDINGS CATEGORY AWARD OF MERIT

WSP Canada Inc.

Project: Saskatchewan Penitentiary - Infrastructure Integrity Program 2

ENVIRONMENTAL CATEGORY AWARD OF EXCELLENCE

PINTER & Associates Ltd.

Project: First Nation Land Management Regime: Environmental/Engineering Challenge

MUNICIPAL INFRASTRUCTURE AND WATER RESOURCES CATEGORY AWARD OF EXCELLENCE

Golder Associates Ltd.

Project: An Innovative Solution to Remediate a Slope Failure on the East Riverbank of the South Saskatchewan River and Preserve the Natural Environment

NATURAL RESOURCES AND ENERGY PRODUCTION AWARD OF EXCELLENCE

Stantec

Project: Boundary Dam Integrated Carbon Capture Storage Project

STUDIES AND SOFT ENGINEERING AWARD OF MERIT

Associated Engineering

Project: Intelligent Transportation System (ITS) Technical Strategy

Young Professional Award



Chelsey Bartlett, P. Eng., Clifton Associates

Chelsey Bartlett, P. Eng., accepts the the association's Young Professional Award from ACEC-SK Vice Chair, Jeff Halliday, P.Eng.

Brian Eckel Memorial Scholarship Award

The 2015 Brian Eckel Memorial Scholarship Award recipient is Lance Pitka, an electrical engineering student at the University of Saskatchewan.

Women's History Month

October was proclaimed as Women's History Month by the Government of Canada in celebration of the many and significant contributions of girls and women to our society – and to the quality of our lives.



ABOVE: Women's History Month Committee: Bob McDonald, P.Eng., FEC, FGC (Hon.), Amy McGregor, Angela Foster, Chandini Prasad, Engineer-In-Training, Jasmyne Barton, Amandeep Kahlon

ABOVE LEFT: Sheila Fahlman of Grandmothers 4 Grandmothers (keynote speaker) receives flowers from Amy McGregor (WHM Chair)

ABOVE RIGHT: Morgan Campbell hosted the event

LEFT: APEGS President Margaret Anne Hodges, P.Eng., FEC

This October was the 86th anniversary of the "Persons Case", when the "Famous Five" – Emily Murphy, Louise McKinney, Irene Parlby, Nellie McClung and Henrietta Muir Edwards – challenged the British Privy Council and won the right for women to serve in the Senate, leading to changes in laws throughout the Commonwealth.

The public was invited to attend this free "Pink Tea" celebration at the Conexus Arts Centre, held October 20, 2015. To support next year's event through sponsorship, providing a display for your organization, or joining the planning committee, please contact reginawhm@gmail.com.

COUNCIL NOTES

October 9, 2015

Delta Bessborough, Saskatoon, SK
17 of 19 Councillors present

- Council appointed John Baron, P.Eng. as Chair of the Professional Practice Examination Committee for a two-year term and Michel Detharet, P.Eng. as Chair of the Licensee Admissions Committee, also for a two-year term.
- The Governance Board reported the following appointments: Randal Hanson, P.Eng., Douglas Hird, P.Eng., Andrea Wong, P.Eng. and Paul King, P.Eng. to the Experience Review Committee for a three-year term; Jeremy Gabel, P.Eng. as Vice-Chair of the Experience Review Committee for a two-year term; Glenn Hussey, P.Eng., Aryan Saadat-Mehr, P.Eng. and Venkatesh Meda, P.Eng. to the Academic Review Committee for a three-year term; John Baron, P.Eng., Cheryl Robertson, P.Eng., Andrea Tresek, P.Eng., Roy Durr, P.Eng., Ryan MacGillivray, P.Eng., and Vlad Zalutskiy, P.Geo. to the Professional Practice Exam Committee for a three-year term; Kelvin Degrow, P.Eng., Michel Detharet, P.Eng., John Yannitsos, Engineering Licensee, Ralph Bock, Geoscience Licensee and Rick Kullman, P.Eng. to the Licensee Admissions Committee for a three-year term.
- Council approved Life Membership for: Richard G. Brattley, P.Eng., Philip D. Burt, P.Geo., Charles M. Dietrich, P.Eng., Peter M. Gallen, P.Eng., Gordon L. Kent, P.Eng., Albert G. Norman, P.Eng., Charles E. Roy, P.Eng., P.Geo., Robert J. Stewart, P.Eng., P.Geo., and Calvin G.A. Straub, P.Eng.
- The Image and Identity Board reported that Dino Philopoulos, P.Eng. and Diana Podborochynski, P.Eng. have been appointed to the Communications and Public Relations Committee for a second three-year term.
- Council appointed Jaylyn Obrugewitsch, P.Eng. Chair of the Connection and Involvement Committee for a two-year term and Peter Zrymiak, P.Eng. Chair of the Equity and Diversity Committee for a two-year term.
- The Image and Identity Board reported the approval of funding to Women's History Month Pink Tea Celebration in the amount of \$750.
- The Education Board reported the following appointments: Gregory Andrisc, P.Eng. and Robert Hawboldt to the Professional Development Committee for a second three-year term; Don Johnston, P.Eng., Debbie Shewfelt, P.Geo., Greg Godwin, P.Eng. and Kristin Myette, Engineer-in-Training to the Student Development Committee for a three-year term; Adeline Chiu, P.Eng. to the K-12 Committee for a three-year term and Stacey Sirois, P.Eng. to the K-12 Committee for a second three-year term; Kurtis Doney, P.Eng. and Montgomery W. Russell, P.Eng. to the Environment and Sustainability Committee for a second three-year term; Dianne Allen, P.Eng., Kevin Hudson, P.Eng., and Kristin Myette, Engineer-in-Training to the Environment and Sustainability Committee for a three-year term; and Kurtis Doney, P.Eng. as the Vice Chair of the Environment and Sustainability Committee for a two-year term.
- Council appointed Terry Werbovetski, P.Eng. as Chair of the Professional Development Committee for a one-year term, Ashley Forbes, P.Eng. as Chair of the Student Development Committee for a two-year term, Stacey Sirois, P.Eng. as Chair of the K-12 Committee for a second two-year term, and Kevin Hudson, P.Eng. as Chair of the Environment and Sustainability Committee for a two-year term.
- The Education Board reported funding approval for the University of Saskatchewan Ore Gangue hosting of the 2016 Western Inter-University Geosciences Conference in the amount of \$7,500 and the University of Regina Engineering Student Society silver level sponsorship of the WESST Annual General Meeting and Retreat in the amount of \$1,000.
- The Discipline Committee reported the appointment of Grant Gingara, P.Eng. as Chair of the Discipline Committee for a two-year term and Dave Rezansoff, P.Geo. as Vice-Chair for a two-year term.
- Council fixed Monday, May 2, 2016 as Polling Day for the 2016 Council Elections.
- Council appointed Andrew Loken, P.Eng., FEC as Chair of the 2016 Nominating Committee and Leon Botham, P.Eng., FEC, Don George, P.Eng., Douglas Opseth, P.Eng. and Grant Gingara, P.Eng. as members of the 2016 Nominating Committee.
- The positions to be contested in the 2016 Council elections are: Vice-President; Group I – Civil; Group III – Electrical and Engineering Physics; Group IV – Geological, Mining, Petroleum, Geophysics and Geoscientists; and Group VII – Environmental.
- The next Council meeting is scheduled for December 3 and 4, 2015 in Regina.

News Beyond Our Borders

NASA spots the ‘Great Pumpkin’: Halloween asteroid

NASA - NASA scientists tracked the Halloween flyby of asteroid 2015 TB145 with several optical observatories and the radar capabilities of the agency’s Deep Space Network at Goldstone, California. The asteroid flew past Earth at a safe distance slightly farther than the moon’s orbit on Oct. 31 at 10:01 a.m. PDT (1:01 p.m. EDT). Scientists are treating the flyby of the estimated 1,300-foot-wide (400-meter) asteroid as a science target of opportunity, allowing instruments on “spacecraft Earth” to scan it during the close pass.

According to the catalogue of near-Earth objects (NEOs) kept by the Minor Planet Center, this is the closest currently known approach by an object this large until asteroid 1999 AN10, at about 2,600 feet (800 meters) in size, approaches at about 1 lunar distance (238,000 miles from Earth) in August 2027.

The gravitational influence of the asteroid is so small it had no detectable effect on the moon or anything here on Earth, including our planet’s tides or tectonic plates.

The Center for NEO Studies at NASA’s Jet Propulsion Laboratory is a central node for NEO data analysis in NASA’s Near-Earth Object Observation (NEOO) Program it is a key group involved with the international collaboration of astronomers and scientists who keep watch on the sky with their telescopes, looking for asteroids that could be a hazard to impact our planet and predicting their paths through space for the foreseeable future.

The NEOO Program, sometimes called Spaceguard, discovers these objects, characterizes the physical nature of a subset of them and predicts their paths to determine if any could be potentially hazardous to our planet. There are no known credible impact threats to date — only the ongoing and harmless in-fall of meteoroids, tiny asteroids that burn up in the atmosphere.

Report on Canadian engineers highlights key tensions

Engineers Canada - The recently released 2015 Engineers Canada Labour Market Study provides 10-year supply/demand projections for 14 engineering occupations (individual disciplines and engineering managers). The report, by the national forum of provincial engineering regulators, highlights a couple of key market tensions. First, it sees increasing demand for replacement of retiring, experienced baby-boom engineers, while noting that new entrants do not have the skills set that retirees have acquired during their work experience.

This tension may be balanced through interprovincial or international migration of experienced workers. Second, it sees strong demand for engineers in Western Canada while noting that most engineering degrees are granted in Ontario and Quebec.

Therefore, a westward migration of engineers is to be expected. Assuming current oil and gas capital expenditure declines are temporary, the report expects the tension to be balanced once again by migration and immigration.

You can read more about the trends, plus breakdowns by occupation and province, in the full report available at engineerscanada.ca.

Technology heralds the future of walking robots

Oregon State University - A study by engineers at Oregon State University suggests that they have achieved the most realistic robotic implementation of human walking dynamics that has ever been done, which may ultimately allow human-like versatility and performance.

The system is based on a concept called spring-mass walking that was theorized less than a decade ago, and combines passive dynamics of a mechanical system with computer control. It provides the ability to blindly react to rough terrain, maintain balance, retain an efficiency of motion and essentially walk like humans do.

This approach to robots that can walk and run like humans opens the door to entire new industries, jobs and mechanized systems. When further refined and perfected, walking and running robots may work in the armed forces. As firefighters they may charge upstairs in burning buildings to save lives. They could play new roles in factories or do ordinary household chores.

In continued research, work will be done to improve steering, efficiency, leg configuration, inertial actuation, robust operation, external sensing, transmissions and actuators, and other technologies. **Video:**<https://www.youtube.com/watch?v=dl7KUUVHC-M&feature=youtu.be>

PEO implementing Elliot Lake recommendations

PEO – Professional Engineers Ontario (PEO) is working with Ontario government officials to implement some of the safety recommendations stemming from the Elliot Lake Commission of Inquiry.

At a July 27 meeting with officials from the attorney general’s office and the Ontario housing ministry, PEO provided the “implementation status” for the Elliot Lake inquiry recommendations that require PEO action.

Eleven recommendations from the inquiry into the June 2012 partial collapse of the rooftop parking deck of the Algo Centre Mall call on the engineering regulator to strengthen its regulatory practices, provide more transparent practitioner information to the public, set standards for structural assessment of existing buildings and the resulting reports, and requiresharing of information about building assessments.

Growing economy, tight labour market forecast for engineers in B.C.

APEGBC – A new study suggests BC engineers, geoscientists, technologists and technicians will soon face a labour shortage that will see more than 31,000 job openings needing to be filled by 2024.

Southeast and Northern B.C. will experience the greatest labour tightness and shortages in the province due to small populations and billions of dollars in anticipated resource projects.

The study, titled Engineers, Geoscientists, Technologists and Technicians Labour Market Information, is

part of a jointly funded initiative to provide important supply and demand information on 31 occupations in B.C. The study looks at Northern B.C., Southeast B.C., Vancouver Island/Coast, Lower Mainland, and B.C. as a whole.

“This research has provided in-depth regional data that will support a critical examination of what needs to be done to bridge the gap,” said Janet Sinclair, Chief Operating Officer, APEGBC.

“As a result, trends in labour supply management are shifting away from today’s boots-on-the-ground model to accommodate the global nature of these professions.”

Industry’s challenge will be meeting the growing B.C. demand for highly-trained professionals, with a very tight supply that isn’t bound by geography, Sinclair noted.



THURBER ENGINEERING LTD.

Mr. Campbell Chow, M.Eng., P.Eng. has been appointed Managing Director of the firm. Campbell received his undergraduate and graduate degrees from the University of Alberta. Campbell joined Thurber’s Edmonton office in 1993 and was appointed as a Principal in 2005. He has served in a variety of technical and management roles in the Edmonton office and was the Branch Manager from 2002 to 2014. He has provided specialist geotechnical and construction materials engineering services for transportation, industrial, infrastructure and commercial projects throughout Alberta including projects at the Edmonton International Airport and the Anthony Henday Ring Road. Campbell is based in Thurber’s Edmonton office.



Mr. David Tara, M.Sc.A., P.Eng. has been appointed President and Chairman of the Board. David received his undergraduate and graduate degrees from the University of British Columbia and Université de Sherbrooke respectively. David joined the firm’s Vancouver office in 1990 and was appointed as a Principal in 2002. David’s expertise encompasses high strain dynamic testing of piles, foundation investigation and design for bridges, buildings, land development projects, transportation and municipal infrastructure. He has worked on major projects including the award winning Richmond Olympic Oval and the Pitt River Bridge. David Practises in British Columbia, Alberta and Saskatchewan and is based in Thurber’s Vancouver office.

Geotechnical • Environmental • Hydrogeology • Materials Engineering and Testing
thurber.ca

Celebrating Our Own

GRAHAM

Graham Construction inducted into the Saskatchewan Business Hall of Fame

Global News - Saskatchewan is growing and someone has to build it. After spending nearly nine decades building the province from the ground up, Graham Construction is being recognized for all its work in the industry.

In September, the Saskatchewan Chamber of Commerce announced that Graham would be the 29th inductee into the ABEX business Hall of Fame.

“The thing that’s so special about it is that the company goes back about 90 years and the province is not much more than 100 years old, so from that perspective, we’ve actually grown up with the province,” said Grant Beck, president and CEO of Graham Construction.

Although its headquarters is now located in Alberta, the company began with the Graham family in Saskatchewan. Back in 1926, P. W. Graham & Sons got their start building railway stations for the Canadian Pacific Railway in Moose Jaw.

During the Great Depression, they worked on government social infrastructure. In the 1950s, the company received the contract to build the Boundary Dam power generating station near Estevan. At the time, it was considered the largest infrastructure project in Saskatchewan’s history.

The company diversified over the decades, providing construction services to every sector of the Saskatchewan economy.

Today, anywhere from 200 to 300 projects are being run by Graham at any given time.

The company still continues to make its mark back at home with such landmark awards as Saskatchewan’s largest infrastructure project to date, the Regina bypass. Its four

other major projects include Saskatchewan’s children’s hospital, the new psychiatric hospital in North Battleford, Saskatoon’s North Commuter Parkway and a water treatment plant in Regina.

The Achievement in Business Excellence (ABEX) Awards were held Oct. 24 at TCU Place in Saskatoon to celebrate Graham’s accomplishments.



John Potter recognized with Esri Canada’s Roger F. Tomlinson Lifetime Achievement Award

Esri Canada press release - Esri Canada today presented John Potter, P.Eng., who has retired from the government of Saskatchewan, with the Roger F. Tomlinson Lifetime Achievement Award for his contributions in advancing the use of geographic information system (GIS) technology in the province. The award was created as a tribute to Dr. Roger F. Tomlinson O.C., a visionary geographer who conceived and developed the first GIS and became known as the ‘father of GIS’. The recognition is given to individuals for their outstanding achievement and contribution to the GIS community during their career.

“John’s work, which spans nearly 40 years, has helped shape the geomatics landscape in Saskatchewan,” said Alex Miller, president, Esri Canada. “From creating one of the province’s first GIS databases in the 1980’s to developing effective data-sharing partnerships, he has helped build a solid foundation for a provincial GIS infrastructure that will serve Saskatchewan well into the future.”

News From The Field

Courtesy Regina LeaderPost



MAP shows students how mining gets done in Saskatchewan

Regina Leader-Post - Grade 7 students from Regina area schools got to experience first-hand how mining is done in Saskatchewan, without actually being in a mine.

About 400 students from Regina Public, Regina Catholic, Prairie Valley School Divisions and File Hills Qu'Appelle Tribal Council spent two hours visiting six pavilions at Campus Regina Public (formerly Cochrane High School) as part of Minerals and Products (MAP), a one-day exhibition sponsored by the Saskatchewan Mining Association (SMA).

The interactive displays demonstrate the six main stages of the mining cycle — exploration, mining, processing, products, sustainability and safety. MAP also shows the students the diversity of career opportunities each sector offers.

MAP is part of the SMA's education outreach program that presents grade 7 students with hands-on, curriculum-related activities related to the mining cycle.

"We'll have over 400 students come through the pavilions today," said Gordon Heidel, executive director of the Regina District Industry Education Council. "There are six pavilions that basically lay out the mining process . . . so the kids get an idea why mining is such an important industry in the province ... and all the careers it takes to make a mine work."

Tracey Irwin, communications manager with the SMA, said the students learn every stage of the mining process at MAP.

"They're walking through the mining cycle, everything from exploration, mining, processing to products, sustainability and safety. With all these hands-on activities, the students get a feel for (mining)."

For example, at the processing pavilion, students learned how electrical currents, magnets and bubbles help with mineral separation. The products pavilion demonstrated how mined minerals are used every day — from toothpaste and computers to bicycles and farming, while at the safety pavilion, students geared up and performed safety tasks with a mine rescue team.

UNIVERSITIES AND RESEARCH



Saskatoon doctor prints 3D replica of patient's brain

CBC News - Will 3D printers, bioprinters change the future of surgery? A Saskatoon neurosurgeon has managed to print a 3D replica of a patient's brain. Dr. Ivar Mendez, head of surgery at the University of Saskatchewan, worked with a team of engineers to produce the model. It's an exact replica of a specific patient's brain and he says it will let him practise surgeries.

Mendez already uses computers in the operating room and a member of his operating room team is a medical engineer. But completing a 3D brain was more complex and would allow them to work on the smallest anatomical features of a brain.

The critical part of the model is that it is an exact replica of the person's brain. If the person has a tumour, it's able to print a replica of the brain with the tumour.

The model is printed in a transparent, rubber-like material. The transparency lets people see all the structures through the surface of the brain. Mendez said it feels very similar to the human brain.

"I'm a neurosurgeon but I'm also interested in art. To me, this was an object of beauty."

Mendez believes this new technology will open doors.

"I envision that in the future we may be able to do procedures that are very difficult or impossible today," he said. "I feel that in

the next 20, maybe 25 years, we will be able to print biological materials. We may be able to print organs.”

He mentioned that today’s technology is already able to print the cartilage of an ear.

“3D printing is in its initial stages, but the future is very exciting.”

First phase of truck wash automation project complete

FarmScope - Scientists have completed the first phase of a project which aims to automate the washing and disinfection of swine transport vehicles.

As part of research being conducted on behalf of Swine Innovation Porc, the University of Saskatchewan, the Prairie Swine Centre, VIDO-Intervac and the Prairie Agricultural Machinery Institute are working to automate the cleaning of swine transport vehicles.

Dr. Terry Fonstad, P.Eng., an associate professor of civil and geological engineering with the University of Saskatchewan, says the project was initiated to help deal with swine disease.

“The very first thing is we needed to know what we were dealing with and so there was a two-phase approach. The first phase involved having the Vaccine and Infectious Disease Organization, Prairie Swine Centre look at the pathogens of interest and how physically from an engineering standpoint could we destroy those pathogens. Then the second phase was to test a way to clean trucks in a short order of time that then also had the potential to be automated.”

U of R researchers close to using drones

CBC News - A flying robot tracking a person through a crowd isn’t a concept from a science fiction novel; it’s the goal of a research project at the University of Regina.

It could help find a lost child or chase a criminal.

“I was flabbergasted when we managed to get that stuff working. It’s pretty science fiction-y and out of this world,” said Raman Paranjape, P.Eng. a professor of electronic systems engineering at the U of R.

Paranjape and his team of researchers have been using drones or unmanned aerial vehicles (UAV) to track objects and even human faces.

A drone can currently lock on to a person’s face and follow them. The aim at the end of the project is to be able to show a UAV an image of a person who it will then look for, tracking them through a crowd.

U of S hosts world mining competition

Global News - University of Saskatchewan hosted the fourth annual World Mining Competition. Students from

around the globe were put to the test at the competition. This year’s theme was ‘Adapting to Uncertainty; Striving for Sustainability.’

“This case competition is unique in the way that it challenges both the financial and the engineering side for students. They really need to look at how the company can be sustainable in a market that is uncertain,” said WMC vice-president of marketing Brianne Mahon.

Fifty-six students in groups of four were challenged to solve a globally relevant mining strategy problem. The multidisciplinary case pulled together geology, engineering and business students.

“This competition creates an ability to analyze, to articulate strategies, to make presentations in front of some of the most frightening judges in the world,” said Edwards School of Business dean Daphne Taras.

Delegates say the competition provides a unique learning experience and a valuable networking opportunity.

INFRASTRUCTURE



Saskatchewan to undergo \$174 million of highway work

Journal of Commerce - The Ministry of Highways and Infrastructure for Saskatchewan announced more than \$174 million of highway work for the 2016 construction season in its fall tender plan. The projects include about 50 km of paving, 115 km of repaving, 40 km in grading and paving, 50 km of maintenance, five bridge replacements or rehabilitations, and two culvert installations.

“A large fall tender plan allows contractors to prepare for work next season, leading to more efficient road building,” said Highways and Infrastructure Minister Nancy Heppner. Highlights include paving the new lanes under construction for the twinning of Highway 7 west of Saskatoon and on Highway 16 east of the city; paving Highway 42 from Keeler to Eyebrow; and grading and paving Highways 41 and 44.

Sask. levelling the procurement playing field

Regina Leader-Post - The provincial government unveiled its new procurement legislation, promising it would “level the

playing field” for Saskatchewan businesses.

While it’s not the sexiest topic in the world, the fact is procurement impacts almost every project in the province, from building roads, schools and hospitals to supplying furniture in government offices and food in prisons.

Up until this point, contracts were awarded to the company that could provide goods or services for the lowest cost — period. Not any more.

Now government ministries and Crowns will consider a much broader set of criteria, including a vendor’s history and their local knowledge of things like geotechnical concerns, environmental factors or local laws.

That’s not to say Saskatchewan-based companies will automatically be considered above a company from, say, Alberta — to do so would contravene the New West Partnership Agreement, of which Saskatchewan is a signatory — but it does mean companies from this province will get more of a look-in on government contracts.

The president of the Saskatchewan Heavy Construction Association, Shantel Lipp, said the new approach will “create a more competitive industry.”

She also thinks it will allow her industry to be “more innovative,” saying there are a lot of innovative techniques and technologies being developed by Saskatchewan companies, “but there was never an opportunity (to use them), because with technology and with innovation there’s a cost associated with that, so now it’s going to level the playing field and make the industry stronger.”

ENERGY



Leaking tank caused delays with carbon capture project

CBC News - A gigantic leaking tank, a six-storey tall structure made of concrete and tile, may be partly to blame for delays in getting SaskPower’s carbon capture plant up and running.

The tank, described by the Crown corporation as “one of the major components in SaskPower’s carbon capture and storage process,” holds more than a million pounds of amine solution. That’s the chemical and water mixture the facility uses to capture CO₂.

SaskPower’s manager of engineering on the project, Doug Daverne, P.Eng. said fluid began seeping from the tank more than a year ago, shortly before the project’s grand opening.

“It was attempted to be repaired, grouted and those sorts of things — and just couldn’t get the last of the seepage to stop,” explained Daverne. It was replaced a few weeks ago.

He said there’s a containment system around the tank, so the fluid didn’t leak into the soil.

SaskPower and the contractor are in a dispute resolution process regarding problems with the carbon capture plant.

Daverne said this is an important project for the province and he hopes to have all the technical issues dealt with soon.

He said he’s expecting “a higher output and a more reliable operation. But not perfection.”

\$525 million SaskPower plant expansion unveiled

Global News - SaskPower is celebrating the expansion of the Queen Elizabeth Power Station in Saskatoon. The \$525 million project includes a newly commissioned plant. Three gas turbines were converted to increase efficiency by 10-15 per cent.

The half-billion dollar Queen Elizabeth Power Station’s expansion project has had its obstacles but is expected to be completed on time and on budget. With the expansion, the plant becomes the number one generating source of power in the province, surpassing conventional coal.

Natural gas accounts for about 40 per cent of total power in the province.

Growth in the province continues to put increasing demands on the power grid. By 2019, enough electricity will be needed to power another city the size of Saskatoon.

The new expansion provides a 204-megawatt increase from 430 megawatts. To put that into perspective, 1 megawatt has the capacity to power approximately 1,000 homes. Saskatoon as a city runs on 200 to 250 megawatts of power.

The project will extend the lifespan of the power station by 30 years, reducing outages and meeting the growth and power demands of the future.

URANIUM AND NUCLEAR

Cigar Lake ramp-up a “game-changer”

Saskatoon StarPhoenix - Despite “very difficult” market conditions leading to lower sales and revenue, better than expected performance at its Cigar Lake uranium mine made 2015 a “game-changer” for Cameco, says its president and CEO.

“We went through a lot of difficult times with that project. Many said it would never produce one pound of uranium,” Tim Gitzel said Monday. “Last year we produced a little bit; we were testing it out. This year . . . hopefully we’ll put 10 million pounds out.”

The Cigar Lake mine produced 3.6 million pounds of uranium in the third quarter, bringing its year-to-date total to 6.7 million pounds. Cameco expects annual production to reach 18 million pounds by 2018.

The prospect of more reactor restarts in Japan coupled with long-term nuclear investment in China means the company is optimistic about the future, Gitzel said.

Saskatchewan continues to look at nuclear power

Regina Leader-Post - SaskPower hasn’t ruled out a nuclear powered Saskatchewan, even if it’s not in the Crown corporation’s immediate plans.

President Mike Marsh says SaskPower is looking at nuclear “through a technology lens right now,” to figure out if it can fit reliably into Saskatchewan’s electricity supply system.

Marsh is well aware nuclear power is, politically speaking, a controversial topic.

The public might have concerns about nuclear energy, but it has never been ruled out as an option for Saskatchewan.

A summer 2013 briefing note from SaskPower, for instance, notes that the small reactors provide “a flexible, cost-effective alternative to larger-scale nuclear reactors.”

“As directed by the provincial government,” it reads, “SaskPower is evaluating the potential for nuclear power” from those small modular reactors.

Marsh says it’s important for SaskPower to “keep abreast of the technology.”

After all, “Maybe next year there’s going to be a huge breakthrough in the technology that the world will rally around, and if we weren’t looking at it, we’d be accused of having our head in the sand.”

To his knowledge, small modular reactors “still haven’t been commercially developed or deployed,” and SaskPower is “nowhere near” using such technology unless it’s “proven.”

ENVIRONMENT

Gunnar cleanup to exceed \$250M, 10 times estimate

Saskatoon StarPhoenix - The cost of cleaning up an abandoned uranium mine in northern Saskatchewan is expected to exceed \$250 million, more than 10 times the original estimate - and the provincial and federal

governments are divided on how the burden will be shared.

Located on the northern shore of Lake Athabasca near Uranium City, about 800 kilometres north of Saskatoon, the Gunnar uranium mine was abandoned in 1964. The site remained littered with radioactive tailings, asbestos-laced buildings and other waste for more than half a century.

The original mine operator, Gunnar Mining Limited, no longer exists.

In 2006, the federal and provincial governments signed an agreement to rehabilitate the site and reduce further ground and water contamination. The project was originally estimated to cost no more than \$24.6 million and take 17 years, according to Natural Resources Canada documents.

The cost of environmental and engineering studies, the remoteness of the site and the complexity of cleaning up radioactive areas caused the budget to expand, according to the Saskatchewan Research Council, which the provincial government contracted to clean up the site.

The total project budget is now estimated to be \$268 million, of which \$13 million is earmarked for rehabilitating other contaminated sites in the area, according to the provincial government. About \$60 million has been spent on the project to date.

Who will foot the bill is unclear. While the initial \$24.6 million was split 50-50, the federal government appears to have dug in its heels. A Natural Resources Canada spokesperson stated, “The Province of Saskatchewan is the owner of the Gunnar site and is responsible for developing remediation plans, funding and management of the remediation project.” Meanwhile, the provincial government appears to want additional funds from Ottawa.

Entrepreneurs find innovative new uses for old mines

NBC News - Where some people saw a hole in the ground, Brent Zettl envisioned a farm.

As president and CEO of Saskatchewan-based Prairie Plant Systems, a biotechnology company that produces engineered plants for medical purposes, Zettl needed a nursery where the environment could be closely regulated and sealed off from predation or contamination by other plants, fungus or bugs. He found all that in an abandoned copper mine in White Pine, Michigan.

“You don’t want some of them to go missing or get a disease,” he said of the genetically modified legumes and mustard plants growing under banks of 1,000-watt lights in a 2,500-square-foot underground chamber.

Although abandoned mines are better known for the environmental and economic problems they sometimes cause, enterprising businesses are finding ways to breathe new life into old diggings. Increasingly, the tombs that once provided the raw ingredients of the Industrial Age

are home to distinctly 21st century innovations, from Zettl's pharmaceutical-grade plant nursery to electronic data storage and green energy. Other entrepreneurs are turning the gashes in the ground into tourist or recreational attractions.

Not every mine is easy to repurpose. Many are polluted with toxic tailings or other dangers. And cleaning an old mine is neither easy nor cheap. Despite such potential drawbacks, many old mines offer a surprisingly hospitable environment to do business.

For Prairie Plant Systems, the underground beds offer multiple advantages. The plants thrive in a controlled environment — with a consistent ambient air temperature of 52 degrees Fahrenheit — and Zettl said the company saves about 10 per cent in electrical costs over above-ground greenhouses. The warren of underground tunnels and rooms also has more space than the company could ever need.

Other retired mines are being put to even more futuristic uses. A former gold mine in Lead, South Dakota is now home to the Sanford Underground Research Facility, a vast underground physics lab where scientists study little-understood ideas such as dark matter and subatomic particles. A company called Iron Mountain uses mines to house giant banks of servers used for “cloud” data storage. The mines provide a natural, low-cost way to cool the servers.

Turning to green building



Moose Jaw Times-Herald - The Building Saskatchewan Green Conference was held in Moose Jaw in November. The two day event brought together architects, designers, engineers and builders with an aim to inspire, educate and connect green building practitioners.

It's fitting that the conference is held in Moose Jaw as this year's theme revolves around 'Green Building in Smaller Communities.'

The Building Saskatchewan Green Conference will provide dignitaries, architects and engineers with tools to save energy, reduce waste and save water when it comes to building communities.

MEDIA RELEASE



Historic Agreement Signed to Launch the First Operational Partnership of a Professional Engineering Firm and a First Nation in Saskatchewan

Saskatoon - 21 October 2015

A new consulting engineering company - Gaia Engineering - has been launched through a Memorandum of Understanding (MOU) between **PINTER & Associates Ltd.** and the **Flying Dust First Nation**. This Joint Venture will go beyond First Nation ownership in an existing engineering company. Instead, it will grow as a separate, but fully integrated and operating entity that will now be able to provide environmental, municipal, geotechnical engineering, project management and safety consulting as well as various land management and policy development services for all First Nation communities across Saskatchewan and Canada.

Gaia Engineering is being established to target new environmental, safety and other civil engineering projects in Canada's mining, energy, utility and forestry sectors, as well as infrastructure and environment projects for other First Nations. The new partnership is not only unique because of an integrated management and marketing structure, but because it is also intended to maximize Aboriginal employment and supply chain development in the engineering profession. A portion of annual profits under this new Partnership will also be dedicated to scholarships in engineering and/or technical training for Flying Dust youth.

PINTER & Associates Ltd. will continue to operate as a long-serving and successful Saskatchewan-based company, outside of these new targeted market sectors. PINTER has won numerous provincial and national awards for excellence and innovation in engineering. Flying Dust First Nation is one of the most progressive communities in Saskatchewan, and a member of the Meadow Lake Tribal Council. A formal ceremony to sign off on the final Operating Agreement is planned for this November.

Calendar Of Events



Kananaskis Short Course on Principles of Hydrology

January 10, 2016 at 8:00 AM
Kananaskis, AB

Two Day Leadership Program for Engineering Professionals - Ctel & RGI Learning

January 11, 2016 at 8:00 AM
Regina, SK

Project Claims and Disputes and Team Building on Engineering and Construction Projects

January 18, 2016 – Vancouver, BC
<https://www.apeg.bc.ca/Events/Events/2016/16JANPCA>

Supply Chain Management

January 18, 2016 – Calgary, AB
<https://www.eply.com/HaskayneExecutiveEducationRegistration>

Contract Administration and Contractual Issues for Engineering and Construction Projects

January 19- 20, 2016 – Vancouver, BC
<https://www.apeg.bc.ca/Events/Events/2016/16JANCAA>

Hazardous Location Standards for Canada

January 25, 2016 – Calgary, AB
<https://meetings.vtools.ieee.org/m/3691>

Introduction to Stormwater Management

January 26, 2016 – Richmond, BC
<https://www.apeg.bc.ca/Events/Events/2016/16JANITS>

Building Productive Working Relationships

January 27, 2016 – Vancouver, BC
<https://www.apeg.bc.ca/Events/Events/2016/16JANBPW>

Assessing Vulnerability to Climate Change: Useful Insights, Tools, and Considerations

January 29, 2016 – Vancouver, BC and Webinar
<https://www.apeg.bc.ca/Events/Events/2016/16JANAST>

Leadership, Problem Solving and Decision Making

February 17 - 18, 2016 – Vancouver, BC
<https://www.apeg.bc.ca/Events/Events/2016/16FEBLPS>

IPEIA - 20th Annual Conference

February 24, 2016 at 8:00 AM – Banff, AB

49th International Conference on Water Management Modeling

Date: Feb 24 - 25, 2016 – Brampton, ON
<http://www.chiwater.com/Training/Conferences/conferencetoronto.asp>

Project Management for Municipal and Provincial Projects

March 7 - 8, 2016 – Vancouver, BC
<https://www.apeg.bc.ca/Events/Events/2016/16MARPMF>

IEEE IAS Electrical Safety, Technical and Mega Projects Workshop

March 13, 2016 – Edmonton, AB
<http://sites.ieee.org/estmp>

SustainTech Conference - SEIMA

March 17, 2016 at 8:00 AM – Regina, SK