

THE PROFESSIONAL



EDGE

ISSUE 137, MARCH/APRIL 2012



VOLUNTEERING



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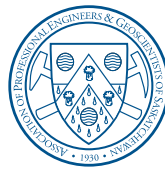
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BY MARTIN CHARLTON COMMUNICATIONS

President's Report



My first exposure to volunteerism was through my parents. We were curlers, and bonspiels in small towns take a lot of volunteers. Young and old alike were involved in putting on the best event possible. When it was time to retire the old curling rink, the local mine donated an ice plant; the town rallied and built a new rink. My father and others like him put in hours of sweat equity to make this dream a reality. Years later that rink still stands as a focal point for the town during winter.

I see that same dedication amongst the ranks of the roughly 200 active volunteers that constitute APEGS. I have been humbled by the hours our members spend to make our organization function. They bring their creativity, experiences and skills so that we can go beyond our status quo. The Equity and Diversity Committee and the Environment and Sustainability Committee are examples of working groups being struck because a core of volunteers saw a need and did something to address it. These examples of change are evidence of our Association's desire to evolve and to prepare our members for emerging issues.

My year as president is drawing to a close and I, like my predecessors, am surprised at how absurdly fast the year has gone by. I am also surprised that the issues I thought would be my challenges this year did not materialize but, just like Murphy was an optimist, others managed to fill my time. The three big issues that I dealt with (and not effectively enough that our next president, Leon Botham, won't have to continue to deal with them) were:

- incidental practice for geoscientists;
- APEGBC/ASTTBC negotiation to develop a scope of practice for technologists (professional technologist, P.Tech); and
- the New West Partnership Trade Agreement and its ramifications for the public and our members.

On the topic of a scope of practice for P.Tech's in British Columbia, it is the APEGS' position that there is no separate practice of applied science technology, but that applied science technology is wholly contained within the practice of professional engineering or professional geoscience. Dividing the regulation of the practice of professional engineering and professional geoscience between two or more pieces of legislation, regulations or bylaws will significantly compromise public safety by creating confusion among the public as to who is qualified to engage in and take professional responsibility for engineering and geoscience practice. Leon, my friend, you are going to have fun with this one.

APEGS Council has, over the past several months, been tracking and reviewing the reports from the draft documents prepared by Geosciences Canada Incidental Practice Task Force (IPTF). APEGS Council has been advised that the unlicensed practice of professional engineering or professional geoscience is contrary to *The Engineering and Geoscience Professions Act*; and as a result of its statutory obligations to "regulate the practice of professional geoscience by members in accordance with [this] Act and the bylaws," Council cannot approve incidental practice as contemplated by the IPTF. It is the position of APEGS that incidental practice would be detrimental to the regulation of the practice of professional geoscience in Canada, which would be contrary to the public interest. Council has directed that its position with respect to incidental practice be communicated

to Geoscientists Canada and its constituent associations well in advance of the Geoscientists Canada annual meeting in June. Still smiling, Leon?


The New West Partnership Trade Agreement is intended to strengthen the Agreement on Internal Trade by providing wider coverage, greater clarity and improved dispute resolution as they apply to procurement of professional services. We have unequivocally supported and endorsed the full mobility of professionals. The APEGS Executive Committee has struggled with some of the procurement methodologies as they apply to professional engineering and professional geoscience. The requirement for a proposal call for the procurement of professional services in excess of \$75,000 may have some inadvertent consequences. The focus on the size of the professional fee may have the unintended consequence of selecting the lowest cost vendor, which can offer less value for the public expenditure and put the health, safety and welfare of the public at risk. We have invited the provincial government to participate at our Annual Meeting this spring in Saskatoon and clarify their position. The Q&A should be very interesting. Leon, you have to attend this session.

The year 2012 marks the upcoming 100th anniversary reunion of the U of S College of Engineering. This event

will take place September 20-23, 2012. APEGS will be the patron sponsor for this event. The reunion will not only be of interest to a large number of APEGS members who are U of S alumni, but will also involve participation of a number of students, faculty and volunteers. As part of APEGS establishing its brand and value, celebrating the history of the province's oldest engineering college, along with the accomplishments of so many of its past and present members, seems like an ideal fit.

It has truly been a privilege to serve as your president this past year. I hope you enjoyed my messages in the *Professional Edge* – they were different! I want to thank the volunteers I have met at meetings and other gatherings. Your dedication is humbling. You really make our Association stand out. To the executive committee, Shawna Argue, Dwayne Gelowitz, Leon Botham, and the APEGS staff, thanks for all your help and support. You made me look good, not an easy thing to do! To my wife, Cindy, thanks for the proofreading, helping me with my speeches and making sure I don't dress like an engineer.

Peter J. Jackson, P.Eng.
APEGS President




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Upcoming Course Schedule	PDHs*	Location	2012		
			Mar	Apr	May
Civil					
Stormwater Management - Design, Inspection and Operation/Maintenance of Stormwater Control Facilities	12	Regina	27-28		
Protecting and Repairing Concrete Structures	18	Winnipeg		16-18	
Building Condition Assessment	24	Winnipeg		23-26	
Evaluation and Rehabilitation of Pavements	12	Regina			14-15
Construction			Mar	Apr	May
Bidding, Evaluation, Negotiation and Contract Award - For Construction Projects	12	Winnipeg		19-20	
Electrical			Mar	Apr	May
Fire Alarm Systems: Design, Installation, Inspection and Testing	12	Regina		23-24	
Transformer Operational Principles, Selection and Troubleshooting	18	Regina			1-3
Modern Power System Protective Relaying	18	Regina			7-9
Environmental			Mar	Apr	May
Environmental Site Assessment and Remediation (2 days)	12	Winnipeg		30	1
Mechanical			Mar	Apr	May
Pumps: Selection, Operation and Maintenance	12	Winnipeg	19-20		



PDHs* : Continuing professional education for licensed engineers is measured in Professional Development Hours (PDHs). A PDH is one contact hour of instruction or presentation.



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Engineers Without Borders:

How working overseas creates change at home

By Martin Charlton Communications



volunteers, after which they headed to different communities in either Malawi, Ghana, Zambia, or Burkina Faso.

“We were taken to our own communities, and boom! You’re in a totally different world because you’re now a visible minority, you’re not speaking the same language,” said Sonntag, a University of Saskatchewan student studying environmental engineering.

For almost four months, she lived in the suburb of Chemusa in Blantyre - the second largest city in Malawi. She worked with a non-governmental organization called Hygiene Village Project, helping to create hygiene groups to build latrines – connecting the masons who built them, landlords who owned them, and the banks for microfinancing.

Soon enough, she adjusted to the new surroundings, eventually learning to speak conversational Chechewa, the local language, and becoming good friends with her host family.

The students who travel overseas with Engineers Without Borders are called junior fellows. They’re pretty much like interns, hopping into a project midstream and doing what they can to help in the few months they’re there.

When Tamara Sonntag went to Malawi in May 2009 with Engineers Without Borders, nothing could prepare her for the culture shock. She spent a week training in Canada with about a dozen other

Canada Day - Mr. and Ms. Juma, host family for EWB volunteer Ali Molaro, in their backyard in Malawi on Canada Day.

Edgar and I - Edgar Phiri, the district water development officer and Ali Molaro are inputting data into the database created for the Mwanza District of Malawi.

Kindred Spirits



A few years ago, APEGS staffer Patti Kindred, P.Eng., FEC and her family decided to adopt a child from Ethiopia. When their son Connor (who was nine at the time) learned about the poverty some Ethiopian children live with, his first thought was to send them an Xbox, but soon realized they needed more important things.

“Where it really started to sink in for him is when he started to learn more about the country and what the conditions might be like, and what his brother or sister might be living with,” said Kindred, director of education and compliance with APEGS.

Connor started fundraising by donating half his allowance, saving money from Christmas presents, and asking friends to give donations instead of presents at his birthday. The fundraising took off after they set up an account with the charity WaterCan and started using social media websites. Now 11 years old, Connor has raised nearly \$32,000 to date.

A big boost to his fundraising came in February of this year when he received the \$10,000 Shining World Compassion

Award from the Supreme Master Ching Hai International Association, an international philanthropic organization. Also, Connor recently received the Global Citizen Award from the Saskatchewan Council on International Cooperation. Connor is the youngest recipient of the award.

Inspired by her son’s efforts, Kindred and her husband Tom are doing their own fundraising activity: climbing Mount Kilimanjaro in October.

WaterCan is organizing the climb as part of their 25th anniversary celebrations, and by coincidence, Kindred and her husband were celebrating their 25th anniversary when they heard about it.

“We decided to do the climb for our anniversary gift to each other,” said Kindred.

It seems as though engineering and a desire to help and create change go hand in hand. As it turns out, Connor may be an engineer in the making—he wants to be an inventor.



Work Crew - Winter, Charles and Willard, employees of the Mwanza District in Malawi.

It's hard to make a big impact that way, but they do what they can, says Ali Molaro, a University of Regina student in her final year of environmental engineering and current president of the U of R EWB chapter.

"I got a really good start on it, but I think that it's impossible to change an entire system in four months," she said.

She went to Malawi last summer, staying in the southern district of Mwanza, working with the district water development office, which provides water to rural communities. The district uses wells, but they're not documented anywhere.

"My role, coming in for four months, was to start a database and get it going. Right now, someone's not living in the district I was living in, but they still check in. Had I not gone there, there wouldn't have been someone there to get it started, so it's worthwhile that I was there."

A different approach

Engineers Without Borders takes a different approach to poverty than many other NGOs.

"We look at the system as a whole and see what pieces are

Hire a STUDENT!

Enrolment is way up in the Co-op and Internship programs at the University of Regina and that means great news for employers!

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Co-op students are available to start in late April-early May and can work for either four or eight months, while Engineering Internship students are available to start in late April-early May for 12 or 16 month terms.

In addition, we have a number of students in the Aboriginal Full Circle Summer Internship program that are also seeking summer placements. Aboriginal interns are from a variety of disciplines and seek work placements between May and September.

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A local food market in Zambia.

broken,” said Stephanie Laing, a fourth year civil engineering student at the U of S.

Laing went to Mkushi in the Central province of Zambia last summer, working with a seed company to increase rural access to high-quality seed and farming supplies.

“We’re very focused on exit strategies - making sure that when we leave a system, we’ve made an improvement. Even if we have made an error in the system, we try to be really transparent about our failures.”

A few years ago, they even published a failure report, an idea that caught on with other NGOs. Often with developmental work, failures repeat themselves instead of people learning from them.

“Once we know what our failures are, we’re less likely to repeat them,” said Laing.

Laing was part of a team creating a new local job that included driving to rural communities with the high-quality seed and supplies they needed, acting as a door-to-door salesperson.

An important part of EWB’s work is that they analyze the new projects they install to make sure they’re actually working. Part of the team working with Laing analyzed what worked and didn’t work with this new position, and shared that information with other groups so they could implement similar positions in other provinces with the best policies possible.

“We’re trying to skew perceptions of westerners going into a country and building things for them. That’s not what we’re about; we’re a grassroots kind of organization. We’re finding means to complete solutions with their own resources, with their own knowledge,” said Sonntag.

In many ways, EWB works as a facilitator, guiding communities to new ideas and approaches with the knowledge that they’ll eventually step back.

“Our mission is always to run ourselves out of business. If we’re not needed here, then that is success,” said Sonntag.

While you don’t have to be an engineer to get involved with EWB, Molaro points out that the way engineers approach problems is key to their success.

“The way you learn to think in engineering and the way you approach problems is the same way Engineers Without Borders approaches problems like poverty. We’re trained to think in a certain way and that’s the same way Engineers Without Borders thinks about problems.”

Changes at home

The organization isn’t solely about making changes overseas.

Only a handful of EWB students get to go overseas each year, but there are thousands of members across Canada. The exclusivity of the junior fellow programs pushes EWB members at home to ask the question, “What change can we make in Canada?”

Last October, the U of S and U of R chapters got involved with the International Aid Transparency Initiative, asking the Canadian International Development Agency to publish where they send all of their money.

“Instead of just saying we sent this many million dollars to Ghana, where did you send it, what projects got made, how did it end up?” said Laing.

There were demonstrations on both campuses, and they contacted local Members of Parliament to voice their concern. Their push for change helped make a difference—CIDA signed on to the initiative in November last year.

“It’s neat that we have this impact, that we’re trying to change Canada’s policies and overseas policies,” said Laing.

Arguably the most important work they do at home is the effort they put in to developing people within the organization.

“Not only are we trying to change systems, we’re also growing people who, in whatever capacity, will be involved and be volunteers and be doing big things,” said Molaro.

Laing, Sonntag, and Molaro all agree that their time with EWB has fundamentally changed their world view and work ethic.

Sonntag says the trip gave her a passion for human development and social justice. “For whatever job I work for, I think there will be that gap missing if I don’t have a cause I can fulfill.”

Not Just a Free Lunch:

The Ins and Outs of APEGS Committees

The month of April carries with it promises of springtime energy, new growth and new directions. It is no surprise, then, that April plays host to National Volunteer Week in Canada.

Canadians from coast to coast have a rich tradition of community service, and engineers and geoscientists share in that tradition on a daily basis. As the focal point of self-regulating professions, APEGS depends on the ongoing contributions of its members to protect public safety and the integrity of the professions.

“My father-in-law used to say that volunteering is the rent you pay for your space on Earth,” says Ken Linnen, P.Eng., who serves on the Professional Edge Committee and is former Chair of the Licensee Admissions Committee.

Although engineers and geoscientists as a group display great volunteer spirit, the fact is that there are just too many demands for volunteer service. Ask any committee Chair to name their number one challenge and he is likely to say “recruitment.”

To help members sift through the pros and cons of many APEGS volunteer opportunities, *The Professional Edge* sat down with the Association’s staff liaisons and asked them two key questions about each committee:

“What can I get?” – are there any personal or professional benefits that members stand to gain by being on a committee?

“What can I give?” - where can a member’s skills and interests be best put to work for the well-being of the professions and the public?



APEGS committees offer members far more than a free meal. APEGS volunteers note opportunities to network, build new skills and contribute to the professions as just a few of the benefits from serving.

Awards

As the name suggests, the purpose of the Awards Committee is to hand out awards. It assesses candidates and criteria for APEGS awards and puts forward nominations for members eligible for other provincial or national awards.

If you enjoy the feeling of starting a standing ovation, this might be the committee for you.

“In theory, the members at large are supposed to put forward nominations for awards. In practice, the Awards Committee members hunt them out. The members of this committee play an essential role in making sure that outstanding members or projects receive the recognition they deserve,” says staff liaison Chris Wimmer, P.Eng.

Connection and Involvement

Calling all party animals: Connection and Involvement may be the committee for you.

“This group assists with organizing the Annual Meeting and various social activities throughout the year. It helps maintain the Association’s connection to the membership and our constituent societies. They are also the group tasked with choosing various member benefit and affinity programs,” says Wimmer.

Communications and Public Relations (CPR)

Public surveys across Canada have time and again shown that engineers and geoscientists are among the most trusted professions in the country. This does not happen on its own.

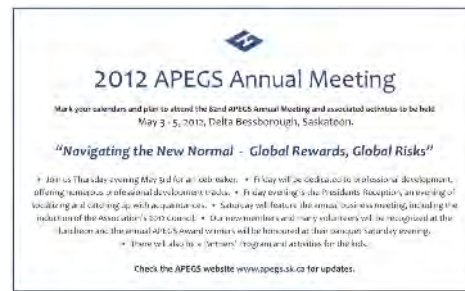
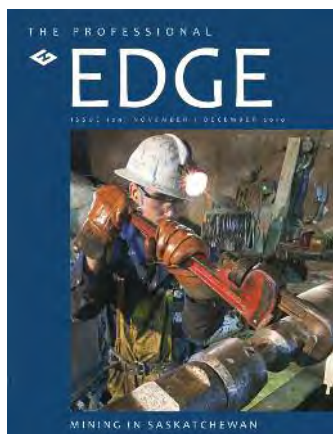
“Public awareness and the reputation of the professions is important to the Association and the CPR Committee members are really the standard-bearers of the professions. They have the responsibility for making major decisions about how the professions are promoted,” Wimmer says.

The CPR Committee is responsible for the Engineering and Geoscience Week supplement, billboard ads, media relations and any other initiatives that promote the professions to the media or the general public.

Professional Edge

If you are this far into the magazine, you already have an idea of the value of the *Professional Edge* Committee. The magazine has been praised and imitated by the publishers of other engineering and geoscience publications. Although the magazine’s stories are written by professional writers, the story ideas, themes and overall artistic direction come from APEGS members themselves.

“Serving on the *Professional Edge* Committee gives members an opportunity to get their creative juices flowing. It gives them a chance to explore and discuss ideas that are important to the professions. Also, like the Awards Committee, it provides a venue to highlight other members who deserve recognition,” says Wimmer.



Equity and Diversity

If you have a passion for social justice or would just like to see the professions better reflect society, the Equity and Diversity Committee is the place for you.

There are many groups that are underrepresented in the professions in Saskatchewan – women, Aboriginals, visible minorities, persons with disabilities. This committee plans events and initiatives to try to reduce these deficits.

“This is a committee where you can feel good about the contribution you are making to society at large. It’s a committee that needs conscientious people who feel a passion for improving the lives of others,” says Wimmer.

Among many other things, this committee is involved in organizing and participating in Women’s History Month and events connected with the Canadian Coalition of Women in Engineering.

Experience Review

Members of the Experience Review Committee serve, essentially, as the gatekeepers to the professions.

“By going through experience review reports, the committee members make the decisions about who is and isn’t qualified to become a licensed member. They have the privilege and responsibility of ensuring only qualified people are allowed into the professions,” says Director of Registration Tina Maki, P.Eng.

With the professions growing rapidly in Saskatchewan, the committee members have their work cut out for them.

“The committee meets every six weeks to review 100-200 reports per meeting. It’s a fairly large committee with 20-25 members which helps spread the work around. The committee also provides members with valuable networking opportunities and insight into all the different types of work that our members-in-training are involved in, which is very interesting,” says Maki.

Academic Review

More than most committees, the Academic Review Committee provides its members the chance to improve

the lives of others. Members review and assess the academic qualifications of internationally trained professionals applying for APEGS membership.

“Committee members have the opportunity to change someone’s life for the better by helping an immigrant qualify for work in his chosen profession. At the same time, they are helping the provincial economy which urgently needs an influx of more engineers and geoscientists. So committee members are making major contributions on both the micro and macro level,” says Kate MacLachlan, P.Geo., Director of Academic Review.

Because the work of the committee can become complex (including assessing documents in foreign languages), the committee has recently been split into three categories of members: full members, who assess reports, attend regular meetings and vote on proceedings; ARC reviewers, who just review reports, do not have a vote and are under less obligation to attend meetings; and special analysts, brought in to assist with matters such as interpreting foreign documents.

K-12

If you like kids, then they need you on the K-12 Committee. Members of this committee are directly involved in planning, funding and participating in student activities and competitions across the province.

“They gain insight into and influence over the province’s education system. They also have oversight of sponsorship requests. All in all, committee members get to make a big difference in the lives of many young people,” says Patti Kindred, P.Eng., FEC, Director of Education and Compliance.

Through their work, committee members help increase awareness of the professions as career choices and help enrich the classroom experiences for many science-minded children.

Student Development

Do you still long for your college days? The Student Development Committee can provide you with a chance to reconnect with campus life. Members support social activities and student initiatives for engineering and geoscience students at the province’s two campuses, as well as serve as mentors for future members of the professions.

“Members help project a message of ‘welcome to the professions’ to the students. They serve as ambassadors for the Association for a wide range of events throughout the year. It is also just a lot of fun to be able to reconnect with the youthful energy of our students,” says Kindred.



Environment and Sustainability

Like the Equity and Diversity Committee, the Environment and Sustainability Committee is suited to people who have a passion for the cause.

This committee calls for people who are front-runners on environmental issues. This committee serves as a change agent for the professions by helping to educate members on environment and sustainability issues and encourage them to include both adaptation and mitigation as part of any projects they undertake.

Professional Development

As conscientious professionals, most APEGS members value any opportunity to make their skills and knowledge base better and better. The Professional Development Committee members not only are able to define professional development experiences for all other members but are also able to experience a wide range themselves.

“Committee members are exposed to a variety of interesting instructors and presenters. They get to contribute ideas and themes for future professional development events. Plus they get to network and interact with many members at events and gather feedback about the quality of our professional development programs,” says Kindred.

Licensee Admissions

Participants in the Licensee Admissions Committee have an opportunity to shape an increasingly important component of Association membership. Committee



members review and judge the experience and education reports of applicants for restricted licences. They also help to define the future direction of restricted licences in Saskatchewan and across Canada.

“With Saskatchewan’s growing appetite for skilled professionals, we are going to have to start looking outside the traditional boundaries of the professions to fill the need. But at the same time, we have to maintain strict standards to protect public safety,” says Kindred.

Professional Practice Exam

After all the years of college and experience training, applicants to APEGS have to pass through one last gate: the Professional Practice Exam. To assist the applicants, APEGS offers a two-day Law and Ethics Seminar to review the topics covered in the exam.

These events provide, in many ways, the ultimate defining event for entry into engineering and geoscience in Saskatchewan. Since APEGS is self-regulating, it is essential that this last gate is a quality production.

Committee members are responsible for participating in seminars and work groups and assisting in the supervision of exams.

“This is a great opportunity to serve as an ambassador of the Association. You are for all intents and purposes the voice of APEGS. Committee members also have the opportunity to make new contacts, and maybe meet potential future employees from among the Association’s fresh new members,” says Kindred.

Investigation / Discipline

Strictly speaking, the Investigation and Discipline committees are not volunteer committees since they are appointed. They are, nonetheless, drawn from the ranks of the members and members can express an interest in serving if they wish.

The work of these committees is among the most serious of the Association. Perhaps more than any others, these committees uphold both the reputation of the professions and the public’s safety.

The Investigation Committee kicks into gear whenever a formal complaint is filed against an APEGS member, which fortunately does not happen often.

“The work of the Investigation Committee is kept strictly confidential. Our members’ livelihoods are at stake, so confidentiality at the investigation stage is extremely important. Should an investigation proceed to a formal complaint in front of a Discipline Panel, then the process becomes a public forum. The way I like to put it is that Investigation is the cops and prosecutor while Discipline is the judge and jury,” says Wimmer.

Members of these committees should have a good understanding of the principles of natural justice and be able to view situations in a thoughtful, unbiased way. The Discipline Committee holds the ultimate authority over members who have been found guilty of professional misconduct or professional incompetence.

“It’s not the most pleasant work in the Association but, on the upside, the Discipline Committee very rarely meets,” says Kindred.

One-offs

No time to commit to a committee? You can still contribute to APEGS through the Association’s one-time events register.

“We are always in need of people to help out for a few hours here and there for things like accreditation visits or special projects. Even if you just have a little time to spare, let us know. You are, of course, always free to say no if an event conflicts with your schedule,” says Maki.

For more information on how you can contribute to the professions and the public by volunteering for APEGS, check out “APEGS Volunteers” under the Members tab at www.apegs.sk.ca.

Member Profile



The Getzlaf engineers - Ken Getzlaf, Ray Getzlaf, Mark Getzlaf, Nicholas Getzlaf, Don Getzlaf, David Getzlaf, Doug Getzlaf and Ian Hetherington - gather at Nicholas's Iron Ring ceremony.

You don't have to look too far to find someone in the Getzlaf family to help you build your home or design your project. At any of their major family gatherings, you'll find eight engineers under one roof. In this special edition of Member Profile, *The Professional Edge* talks to Ken Getzlaf, P.Eng., Mark Getzlaf, P.Eng. and their sister Noreen Hetherington about their family's connection to the engineering profession.

The Getzlaufs originally hail from the Avonlea area. They are related to sports stars Ryan and Chris Getzlaf. The family has four engineers among the baby-boomer generation and another four among their children.

EDGE: How did you end up with eight engineers in your family?

Mark: A big part of the reason is that we come from a large family – 12 kids. You often find in large families that the older kids help raise and serve as role models for the younger ones. In my case, I was starting grade 1 when Ken was starting his first job. As soon as Ken came home with a new sports car, I knew I wanted to go into engineering too.

Ken: The car was an AMC Javelin, as I recall. Our parents were also a major influence. They were both teachers before they took up farming. All the time we were growing up, they drilled into us the importance of education and being able to support ourselves. As well, dad had been a pilot and flight instructor in the Second World War. I think I get my mechanical inclination from him.

Noreen: The farm environment itself was also a part of it. It gave us all a strong work ethic and a knack for solving problems. Being in a small community, although we had excellent teachers, we didn't have guidance counsellors so we had to figure out our own career paths.

EDGE: So if Ken was the trendsetter, what drew him into the field?

Noreen: Ken just always had a passion for gadgetry. He was always working on radios and motors. He once won an award for an invention that helped level the grain in storage bins. That was typical of my siblings; many of them went through school on scholarships and awards.

Ken: While it's true that I always loved gadgetry, I don't think engineering was a slam-dunk for me. Originally I was drawn to the purely electronic side of things. Then I met a friend of the family who was an electrical engineer who worked on electrical systems at the

Belle Plaine potash mine. He became a mentor to me and encouraged me to take engineering at what at the time was the Regina campus of the U of S. Back then, you could only take your first year there so I soon transferred to Saskatoon.

EDGE: Noreen, none of the girls in your family – yourself included – went into engineering. Do you have any theories why that is?

Noreen: No, it's a mystery. We all had the same drive for higher education and professional life. The girls in the family all have post-secondary education and have pursued a range of careers – business, nursing, education and so on. Yet, even though all the girls excelled in the same academic subjects to the same degree as the boys, none of them seem to have been inspired to study engineering.

EDGE: Ken and Mark, what would you say were your proudest achievements as engineers?

Ken: Working on mine development I also feel a great surge of pride whenever a mine goes into production. But out of all of them, if I had to pick, I'd say the one I worked on in Zaldivar, Chile. It was the first project where I served as project lead for the electrical systems. It was also the biggest and most remote project I've worked on.

Mark: I'd say the work I did for BBT Geotechnical Consultants Ltd. Straight out of university, I opened an office for them in Bonnyville, Alberta at the age of 22. As far as I know they're still in business, although they've been through some mergers and name changes since then.

EDGE: Who would you say has been the biggest influence on your lives in general and on your careers in particular?

Mark: In terms of life in general, I believe that I can speak for all of us in saying that it was of course our parents with the high expectations they set, the great example with their own education, and their support for each of us to pursue a career of our choosing. Also my older siblings, as I am number 11 in

the family, and my wife (who has been with me for 31 years) probably also had the biggest influence on my career choices.

My experiences with many professional engineers as a manager in consulting and environmental regulation and now as a senior manager with PotashCorp all have had a tremendous influence on my career over the years.

Ken: I would echo that regarding our parents' influence. On the career side, I would also add the professionals at Placer Dome where I first started doing mine development. I met many of my mentors there. They developed their own mines and didn't rely on consultants, so the in-house team became a very skilled and dynamic bunch.

EDGE: I understand you had a significant family engineering event recently?

Mark: My son Nicholas is graduating from mechanical engineering this spring so it was his Iron Ring Ceremony that brought us all together. We managed to get all the engineers – even Noreen's son, Ian, from England – to come back to Saskatchewan for our eighth Iron Ring ceremony. We are always there for each other.



Roof Management & Inspection Services Ltd

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Roof Management & Inspection Services Ltd (RMIS) is a fast growing, Saskatchewan based, full service Roof Consulting and Professional Engineering firm with offices in Regina and Saskatoon. RMIS specializes in providing commercial roof system, building envelope and fall protection system design as well as professional project management services. We recognize that the success of our team is based upon the strength and talent of our people. Therefore, we are driven as an organization to recruit and develop the best people in the industry. We believe in exposing our people to challenges that help them grow as professionals and as individuals.

Currently, we are looking to hire a **Structural Engineer** to join our team in Regina. The qualifications for this position are:

Degree in Civil Engineering with over 5 years of related experience in structural engineering. Successful candidate must be a licensed Professional Engineer. Preference for experience in commercial or institutional building development. Working knowledge of the National Building Codes and applicable Health and Safety Act and Regulations is essential. Knowledge of commercial roof and system design principles and standards would be an asset.

Salary is \$85,000 to \$110,000 per year dependent on qualifications and experience. We also offer opportunity for 25% annual bonus. In addition, RMIS also offers industry leading pension, medical, dental, life and disability benefits plans.

If you are looking for opportunity and advancement within a rapidly growing team, please submit resume to **Roof Management & Inspection Services** - 3638 McCallum Avenue Regina, SK, S4S 0S5 or Fax to (306) 352-4607.

Consulting Engineers of Saskatchewan

Celebrate 35th Anniversary

The Consulting Engineers of Saskatchewan (CES) celebrated 35 years of achievements at receptions held at the Bessborough Hotel in Saskatoon on February 28 and the Hotel Saskatchewan in Regina on February 29. National, provincial, municipal and industry dignitaries joined CES members to recognize their contributions to the province.

CES represents a total of 54 engineering and geoscience consulting firms in the province. Engineering companies are leading the way in this era of economic growth within the province of Saskatchewan. The results are investments in public infrastructure and private industry capital projects ranging from agriculture to infrastructure, resource development in mining, oil and gas, and water-related projects, to high-tech specialized systems.

Since inception, CES member firms have built strong working relationships with public and private industry. “The founding members of our association laid the groundwork to allow CES to be today’s business voice of consulting engineers and geoscientists in Saskatchewan. They came together to build strong relationships with public and private industry clients as they discussed issues of common concern,” said David Tratch, P.Eng., Chair of CES, addressing reception attendees.

“The consulting engineering and geoscience industry in Saskatchewan has come a long way in the last 35 years. Our industry capacity has quadrupled in the last 10 years alone. In the year 2002 we had approximately 600 professionals and support staff. This number is currently about 2,400 today.”

The Government of Saskatchewan congratulated the CES on 35 years in what has been a positive and valuable working relationship.

“Our recent growth has resulted in new projects and development for the province and new opportunities in your industry. All signs point to additional growth well into the future. We’re well aware that in order to sustain our province’s growth, we must maintain and foster relationships with key associations like the Consulting Engineers. This partnership has been beneficial for the past three and a half decades and going forward, we’ll continue to tap into the innovations, skills and knowledge of CES,” said Saskatchewan Minister of Highways and Infrastructure Jim Reiter.

Herb Kuehne, Chair of the national association, Consulting Engineering Companies – Canada, or ACEC, congratulated CES member firms.

“You have achieved a true milestone representing the interests of our Industry in Saskatchewan. The participation of you, our member firms, in CES is critical to the success of your business. CES is one of the cornerstones of ACEC, helping to build a strong and vibrant industry in Canada. Our success is a result of your participation in CES and ACEC,” said Kuehne.

Saskatoon Mayor Don Atchison and Regina Deputy Mayor Wade Murray told the gatherings that forecasts see continued growth for their cities over the next 25 to 50 years. Building on the foundation of the past 35 years, Consulting Engineers of Saskatchewan is up to the task.





**May 3, 4 and 5, 2012
Delta Bessborough Hotel, Saskatoon, SK**

Registration

Name _____ Designation _____

Representing _____

Email _____

Guest Name _____

Dietary Requirements? _____

(check the events that you and/or your guest will attend)

Thursday, May 3		Member	Guest
6:00 pm - 10:00 pm	Ice Breaker	<input type="checkbox"/>	<input type="checkbox"/>
Friday, May 4		Member	Guest
7:30 am - 9:00 am	Buffet Breakfast	<input type="checkbox"/>	<input type="checkbox"/>
8:30 am - 12:00 pm	Track Sessions (morning session)	<input type="checkbox"/>	<input type="checkbox"/>
9:00 am - 11:00 am	Tours - Canadian Light Source / Saskatoon Bridge	<input type="checkbox"/>	<input type="checkbox"/>
12:15 pm - 2:00 pm	Professional Development Luncheon	<input type="checkbox"/>	<input type="checkbox"/>
2:30 pm - 4:30 pm	Tours - Canadian Light Source / Saskatoon Bridge	<input type="checkbox"/>	<input type="checkbox"/>
2:30 pm - 4:05 pm	Track Sessions (afternoon session)	<input type="checkbox"/>	<input type="checkbox"/>
8:00 pm - 11:00 pm	The Presidents' Reception	<input type="checkbox"/>	<input type="checkbox"/>
Saturday, May 5		Member	Guest
7:30 am - 9:00 am	Buffet Breakfast	<input type="checkbox"/>	<input type="checkbox"/>
8:30 am - 9:00 am	Business Session Registration		
9:00 am - 12:30 pm	Business Session	<input type="checkbox"/>	
9:00 am - 4:00 pm	Youth Science Day (ages 7 to 14) name _____ age _____ (lunch provided) name _____ age _____ name _____ age _____		
10:00 am - 3:30 pm	Partners Program		<input type="checkbox"/>
12:30 pm - 2:30 pm	Recognition Luncheon	<input type="checkbox"/>	<input type="checkbox"/>
6:00 pm - 10:00 pm	Awards Banquet (\$50 / person)	<input type="checkbox"/>	<input type="checkbox"/>

Registration Deadline April 20, 2012

Mail to APEGS: 104 - 2255 13 Avenue Regina SK S4P 0V6
Fax: (306) 525-0851 email: angelaf@apegs.sk.ca

For hotel rooms please contact the hotel directly (quote "APEGS" for the conference rate, rooms will be held until April 2, 2012)

Delta Bessborough, Saskatoon SK 1 800 268-1133



A P E G S

82nd Annual Meeting

**May 3 - 5, 2012
Delta Bessborough
Saskatoon, SK**



www.apegs.sk.ca

Thursday May 3

Evening Welcome Event

Friday May 4

Professional Development
Streams

Future Challenges
Global Impact
Local Action
APEGGS and You

Professional Development
Luncheon

Featuring a keynote
address from economist
and author Linda Nazareth

Presidents' Reception

Saturday May 5

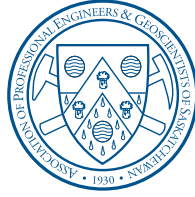
Business Session

Recognition Luncheon

APEGGS Awards Gala



**Navigating the New Normal
Global Risks - Global Rewards**



Awards Winners & Awards Banquet

Saturday, May 5, 2012

Reception 6:00 pm & Banquet 7:00 pm

Delta Bessborough Hotel, Saskatoon

Outstanding Achievement Award - Dr. Arthur T. Bergan, P.Eng.

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

Promising Member Award - Sarah M.C. Gauthier, P.Eng.

The Promising Member Award was established in 1998 to recognize exceptional achievements by a professional member in the early stages of his/her career in Saskatchewan.

McCannel Award - Harry A. Sabier, P.Eng., FEC

The McCannel Award was established in 1983 to honour service to the Association of Professional Engineers and Geoscientists of Saskatchewan, and to the professions as a whole. The McCannel Award is named after Roy McCannel, a founding member of the Association.

Brian Eckel Distinguished Service Award - Clarence A. Reed, P.Eng., FEC

This award was established in 1978 to recognize outstanding contributions in service to the community, the Association, technical and learned organizations, as well as to honour distinctive and outstanding achievements in professional and technical fields. The Distinguished Service Award is an honour given only to those who truly exemplify the best standards of engineering and geoscience in Saskatchewan. In 2004 this award was renamed the Brian Eckel Distinguished Service Award in recognition of Brian Eckel's contribution to society, the profession and the Association.

Exceptional Engineering/Geoscience Project - Saskatchewan Watershed Authority, Flood Mitigation Management

This award, founded in 2001, recognizes accomplishments in engineering and/or geoscience. The project team must be predominantly made up of Saskatchewan engineers or geoscientists. The project may be located in or outside Saskatchewan.

Environmental Excellence Award - Saskatchewan Research Council, Combined Heat and Power Technology Project

The Environmental Excellence Award was established in 2005. It is given in recognition of exceptional achievements by an individual or team in the application of engineering, geological and/or geophysical methods related to environmental protection and preservation.

Tickets: \$50 per person

For Tickets – Contact the APEGS Regina Office: 525-9547 Toll-free: 1-800-500-9547 Email: angelaf@apegs.sk.ca



Awards Nominations

Do you know a professional engineer or geoscientist who should be considered for an award?

Do you know about an engineering or geoscience project that deserves recognition?

The Awards Committee is seeking nominations for the annual APEGS awards as well as for a range of other provincial and national awards.

For more information on awards or the nomination process, please contact the APEGS office at 1-800-500-9547, fax (306) 525-0851 or email apegs@apegs.sk.ca.

2011 FEC Awards

The Awards Committee has recommended that the following be bestowed with the honour and have the privilege of using the designation of “Fellow of Engineers Canada” - FEC or of “Honorary Engineers Canada Fellow” - FEC (Hon.).

Margaret Anne E. Hodges, P.Eng., FEC
Peter J. Jackson, P.Eng., FEC
Lyle R. Jones, P.Eng., FEC
David D. Kent, P.Eng., FEC
Barbara Lakeman, FEC (Hon.)
Kenneth G. Linnen, P.Eng., FEC
Tina C.O. Maki, P.Eng., FEC
Aaron V. Phoenix, P.Eng., FEC

RCE Saskatchewan

APEGS is proud to be a sponsor of the RCE Saskatchewan Recognition Program which provides recognition to innovative research, projects and activities promoting education for sustainable development in Saskatchewan

Projects will be recognized at a celebratory luncheon on Thursday, June 7, 2012, in the Edna May Forbes Lecture Theatre at the Wascana Centre in Regina.

The deadline to apply for the award is May 1, 2012.

For more information, visit www.saskrce.ca/RecognitionProgram

Scrutineers Required

Council established polling day for the upcoming Council elections as April 30, 2012.

Ballots will be counted in the APEGS office in Regina on the evening of Monday April 30, 2012 commencing at 7:00 p.m. We require eight members to volunteer approximately two hours of their time to tally the ballots.

Please phone Angela Foster at 525-9547 or email Angela at angelaf@apegs.sk.ca by April 27, 2012 if you are interested in participating in this task. Volunteers from past years are most welcome.



ensuring public safety



Saskatchewan's Professional Engineers and Geoscientists enhance our quality of life, meet the challenges of environmental sustainability and protect public safety. Because of their impact on society, the practice of professional engineers and geoscientists is strictly regulated by the Association of Professional Engineers and Geoscientists of Saskatchewan.

Join over 9,000 APEGS members in congratulating our newest members – dedicated professionals who have completed a minimum of 8 years of university study and work experience to earn the designation of Professional Engineer (P.Eng.) or Professional Geoscientist (P.Geo.).



Nicole Allan, P.Eng.



Farooq M. Ashrafi,
P.Eng.



Albert Avidor, P.Eng.



Mohammed Aziz,
P.Eng.



Lakshminarayananarao
Bachu, P.Eng.



Allison M. Biggs,
P.Eng.



Scott C. Blacklock,
P.Eng.



Daniel A. Burns,
P.Eng.



Michael B. Cannon,
P.Eng.



Paul Caughlin, P.Eng.



Rajeev Chadha, P.Eng.



Clarence Cormier,
P.Eng.



Eric Crum, P.Eng.



Phung-Minh Dai,
P.Eng.



Bruce J. Davison,
P.Eng.



Anthony E. Dingman,
P.Eng.



Darryl Doucet, P.Eng.



Peter Dueck, P.Geo.



Shane Elian, P.Eng.



Erica Emery, P.Eng.



Chris Englot, P.Eng.



Brock Galecki, Eng.



Jimmy Boy Gamueda,
P.Eng.



Meghan Gervais,
P.Eng.



Adam Grabka, P.Eng.



Rajani Gurung, P.Eng.



Gregory Hain, P.Eng.



William Hale, P.Eng.



Amr Henni, P.Eng.



Scott Higbee, P.Eng.



Mohammad Hossain,
P.Eng.



Tim Jantzi, P.Eng.



Gabriel A. Jimenez,
P.Eng.



David Jobe,
Engineering Licensee



David Khani, P.Eng.



Nathan E. Klug, P.Eng.



Adam C.H. Lai, P.Eng.



Lorne Lapham, P.Eng.



Timmy M. Le, P.Eng.



Katie Ledding, P.Eng.



Juelin Li, P.Eng.



Cheng Hsing Lin,
P.Eng.



Marvin J. Loewen,
Engineering Licensee



Omar E. Lopez, P.Eng.



James P. Lukashenko,
P.Eng.



Michael P. Maendel,
P.Eng.



Wilson A. Martinez,
P.Eng.



John H. Miles, P.Eng.



Tricia N. Milner,
P.Geo.



Ming Mok, P.Eng.



Golam Mostafa, Md.
P.Eng.



Khalil Muhammad,
P.Eng.



Adedamola O.
Oladeinde, P.Eng.



Scott Pearson, Eng.



Stephen Perras,
P.Eng.



Fuentes C. R. Quevedo,
P.Eng., Geoscientist-In-
Training



Nicole Reid, P.Eng.



Crystal Rinas, P.Eng.



Hongcan Ruan, P.Eng.



Alicia Sadleir, P.Eng.



Thomas Saunders,
P.Eng.



Brad Seipp, P.Eng.



Tetyana Shved, P.Eng.



Conrad Sigurdson,
P.Eng.



Neil Silva, P.Eng.



Mahesh Sivakumar,
P.Eng.



James Skowronski,
P.Eng.



Tyson E. Snider,
P.Eng.



Ryan Spelay, P.Eng.



Liwei Su, P.Eng.



Bruce Tang, P.Eng.



Scott D. Turk,
Engineering Licensee



Mohammad Uddin,
P.Eng.



Derek A. Van Nes,
P.Eng.



Holly Wallace, P.Eng.



Dong Wang, P.Eng.



Bret N. Ward, P.Eng.



Grant Weninger,
P.Eng.



Jillian N. Willick,
P.Eng.



Shane P. Wolffe,
P.Eng.



Allan Wrolson, P.Eng.



Qian (Tracy) Yang,
P.Eng.



Bahodir (Bob)
Youlyahshiev, P.Eng.



Xiaodong Zhang,
P.Eng.

**Our Mission
Your Future.**



www.apegs.sk.ca

Council Notes

November 25, 2011, Delta Bessborough, Saskatoon SK

16 of 19 Councillors present

- Council appointed Rick Kullman, P.Eng. to a three-year term as Engineers Canada Director, commencing after the June 2012 Engineers Canada meeting and ending after the May/June 2015 Engineers Canada meeting.
- Council approved the proposed changes to Experience Review Guideline 1, Engineer-in-Training Report on Experience, Geoscientist-in-Training Report on Experience and Self-Check List.
- Council appointed Stephanie Campbell, Engineer-in-Training as Chair of the Student Development Committee for a two-year term ending after the first meeting of the Committee following the 2013 APEGS Annual Meeting.
- Council appointed Kelly Wyatt, P.Eng. as Vice-Chair of the Investigation Committee for a two-year term ending after the first meeting of the committee following the 2013 APEGS Annual Meeting.
- The Engineers Canada representative reported that the CEO group is looking at developing a national position with respect to the P.Tech. designation. The report indicated that Engineers Canada will attempt to facilitate the process.
- The Geoscience Canada representative reported that Geoscientists Canada has engaged an articling student to review the legislation that regulates geoscientists across Canada, and particularly the impact of the legislation on mobility. This was in response to the Incidental Practice Task Force Update and Summary.
- Council approved the 2012 budget of the Association.
- Council approved an expenditure of \$25,000 to be the Patron Sponsor of the 100th Anniversary of the College of Engineering at the University of Saskatchewan.
- Council recommended that APEGS commit \$50,000 to an annual scholarship and/or bursary program. The structure of the program will be approved by Council in 2012.
- Council approved the three elements of the Canadian Framework for Licensure: Continuing Professional Development; Accountability of Engineering Organizations; and International Recognition Agreements.
- Council approved the APEGS Good Character Guideline. The revised guideline has been applied by the Registrar's Advisory Committee.

In Memoriam

Brian D. Gerbrandt, P.Eng.
Reginald R. Moses, P.Eng.
Michael D. Watson, P.Eng.

2011 APEGS Book Prize Winners

Every year APEGS is pleased to reward high academic achievement in engineering and geosciences through our university book prize. APEGS would like to congratulate all these winners of a \$300 gift certificate for the books of their choice at their University Bookstore.

U of S – College of Engineering

Student with the highest grade 12 marks registered in first year: Carlin Renouf

Most distinguished student at the end of third year:

Agricultural & Bioresource: Brittany Thoms
Chemical: Victoria Stuart
Civil: Stephen Glum
Computer: Brett Hysuik
Electrical: Jason Pannell
Engineering Physics: Matthew Wessel
Environmental: Ashley Kirkpatrick
Geological: Myles Zimmer
Mechanical: Justin Gerspacher

U of S – Geosciences

Most distinguished students at the end of third year:

Geology: Andrew May
Geophysics: Christine Shiels

U of R – Faculty of Engineering

Student with the highest grade 12 average registered in first year: Christopher Chmielewski

Student with the highest average for semester 6 & 7:

Electronic Systems: Lu He
Environmental Systems: Ye Zhou
Industrial Systems: Mark Selzer
Petroleum Systems: Souheil Elmabrouk
Software Systems: Michael Charleson

U of R – Geosciences

Most distinguished student at the end of third year:

Maria Brandt



University of Saskatchewan Space Design Team Satellite Challenge



ABOVE: The University of Saskatchewan Space Design Team is constantly adding new team members. It currently boasts a team of about 45 members who come from a variety of different disciplines including engineering, physics, computer science and commerce. The team's unique blend of skills allows it to explore problems from many different angles.

LEFT: Artist conception on nano satellite.

In September 2010, the University of Saskatchewan Space Design Team (USST) joined the Canadian Satellite Design Challenge (CSDC). Now the team is six months away from the end of this two-year design challenge. The nanosatellite design is complete, and the USST is now entering the construction phase. Nine Canadian universities are now participating in the CSDC, all striving to win this competition and launch their nanosatellite into orbit by the end of 2012.

In order to create the complex subsystems of our satellite, the USST has been divided into five design teams:

structures, telemetry, command and data handling, power and payload. The USST's most recent accomplishment, completion of the critical design review in February of 2012, provided valuable feedback on the current designs of the nanosatellite.

The team is now working to improve upon designs and enter the construction phase of the project, which will require a large fundraising campaign.

\$300,000 must be raised in order to purchase materials, pay for travel and work towards sustainability of the USST. Following the critical design review, the USST will begin construction of its satellite and await final testing by a panel of experts this September in Ottawa. At least one winning satellite will be chosen in October to be launched into orbit.



Western Inter-University Geosciences Conference

On January 5, 2012, Regina played host to the Western Inter-University Geosciences Conference (WIUGC), a student-run, student-oriented conference that is hosted by a different Western Canadian university every year.

WIUGC provides opportunities for undergraduate and graduate students to present research projects, showcase mapping and fieldwork studies, interact with professional geoscientists and meet potential employers. This conference also provides a unique opportunity for students

to meet and network with other geoscience students from across Western Canada.

The success of this conference is directly dependent on the generous support from its sponsors. APEGS was pleased to serve as an A-Level (Iherzolitic) sponsor for this event. APEGS would also like to extend thanks and congratulations to all of the volunteers, presenters and industry representatives for their time and effort to make this conference possible.

Cardboard Boat Races – Ready, Set, Get Wet!



For the past four years, APEGS has provided volunteers to judge the Cardboard Boat Races that are held in May and June at SIAST Kelsey Campus and the Harry Bailey Aquatic Centre, and organized by the Saskatoon Industry Education Council.

This is an annual event in Saskatoon for grade 7 and 8 students to teach structure and design in a fun and meaningful way. Students construct their vessels during the morning session using only cardboard, duct tape and packing tape, and then put them to the test in the pool

during the afternoon session. In 2011 over 1,350 energetic and excited students participated in the event.

The Cardboard Boat Races are a great way to connect with students and teachers. Judges are assigned to evaluate teams during the construction in the morning, and assist with timing the races in the afternoon. APEGS volunteers give the students a presentation during the lunch program about career opportunities in engineering and geosciences.



Registrar's Advisory Committee:

Member Applications Denied Due to Character Issues

By Tina Maki, P.Eng., Director of Registration

The Registrar's Advisory Committee had some cases come before it recently due to false statements made on member application forms. This committee, made up of the Chairs of the Academic Review Committee, Experience Review Committee and Licensee Admissions Committee, reviews applications where an issue of character comes up during the application process. The committee uses the Good Character Guideline to make its determination and makes a recommendation to the Registrar. The Good Character Guideline can be found on the APEGS website under Registration, Overview.

Cases can come before the Registrar's Advisory Committee when an applicant:

- a) has a record for professional misconduct, professional incompetence, or contravention of a professional statute with a professional regulatory organization or agency;
- b) has committed a criminal offence for which a pardon has not been granted pursuant to the *Criminal Records Act*;
- c) has been found to be at fault in a civil action relating to negligence in his or her professional practice; and
- d) wilfully obtains or attempts to obtain registration or renewal of registration by cheating on an examination, making or causing to be made a false statement on his/her application, or committing any other impropriety during the application process

In three recent cases, the applicants did not disclose previous applications to other Associations. These applicants had been assigned confirmatory technical exams by the other Associations.

In one case, the applicant wilfully provided false information on the member-in-training application form and the application was denied.

In another case, the applicant claimed that s/he misunderstood the application form. The Registrar's Advisory

Committee determined that the application form was clear and if the applicant does not understand or does not carefully read what s/he is signing then their ability to practise their profession is called into question. This application was also denied on the basis that a false statement was made on the application form.

In a third case, the nature of the information provided by the applicant was such that it did not preclude registration and s/he was recommended for registration by the Registrar's Advisory Committee.

In all of these cases, there was other information that the Registrar's Advisory Committee considered when making the decisions. Everything this committee deals with is sensitive and confidential. These decisions are being published in *The Professional Edge* to inform members and prospective applicants of the importance of providing accurate and complete information on application forms. Professional conduct is integral to membership. The Code of Ethics (section 20 of *The Engineering and Geoscience Professions Regulatory Bylaws, 1997*) is to be recognized as a set of enduring principles guiding your conduct and way of life. The application process is the initial stage to membership and good professional conduct is required at every stage.

Important considerations in these cases:

It is very important that applicants carefully complete application forms and disclose all relevant information. Not doing so could mean denial of the application.

A decision of the Registrar to deny an application can be reviewed upon the applicant's request to the APEGS Council and can be appealed further to the Court of Queen's Bench pursuant to sections 24 and 25 of *The Engineering and Geoscience Professions Act*, respectively.

News Beyond Our Borders



Prime Minister Stephen Harper (at left) meets with Herb Kuehne, Chair of the Association of Consulting Engineering Companies | Canada.

Consulting Engineers Meet with Prime Minister

Officials from the Association of Consulting Engineering Companies | Canada met with Prime Minister Stephen Harper to thank the Government of Canada for its long-term infrastructure plan.

“Infrastructure is vital to Canada’s public safety, economic growth and quality of life. By committing to work with the consulting engineering industry and other various stakeholders, the Government of Canada has demonstrated that Canada’s infrastructure is a priority,” the ACEC stated in a press release.

A plan was announced by the Minister of Transport, Infrastructure and Communities on November 30, 2011 to work with ACEC and other stakeholders. ACEC regards this commitment as being consistent with its recent position paper on long-term infrastructure investment. ACEC has already begun discussions with Infrastructure Canada on the next steps, which include taking stock of what the government and its partners have accomplished to date; identifying knowledge gaps; addressing priorities; and discussing the orientation of the long-term plan with stakeholders.

Source: Association of Consulting Engineering Companies | Canada

New Quality Management Guidelines on the Way

The Association of Professional Engineers and Geoscientists of British Columbia have made further progress towards implementing new Quality Management Guidelines. There are now six guidelines waiting to be approved by the APEGBC Council:

- Use of the APEGBC Professional Seal
- Direct Supervision
- Retention of Project Documentation
- Documented Checks of Engineering and Geoscience Work
- Independent Review of Structural Designs
- Field Review of Projects During Implementation or Construction.

While the guidelines on the use of seal and the independent review of structural designs are updates of existing guidelines, the other four guidelines are completely new. In conjunction with the quality management bylaw, they will provide guidance and establish a standard of care for members and licensees to follow in their practices.

Source: The Association of Professional Engineers and Geoscientists of British Columbia

Ontario Energy Efficiency Requirements

Ontario engineers involved in construction and building permit activities must now adhere to new energy efficiency and occupancy requirements, following recent changes to the Ontario Building Code (OBC).

As of January 1, 2012, building permits for proposed construction projects must comply with enhanced energy efficiency requirements, part of the Ontario housing ministry’s road map to energy efficiency in the building and construction trade.

A second building code update, which also came into effect January 1, requires that inspections be made and permits issued prior to anyone occupying new residential buildings of specified sizes.

In a statement issued by the housing ministry’s building and development branch, the changes are said to provide several “compliance paths” allowing affected professionals to incorporate the latest changes into their practice. Effective January 1, however, compliance with the EnerGuide 80 performance standard will be mandatory.

The housing ministry recommends professionals consider enrolling in technical training courses on building code energy efficiency requirements. The courses have been developed by the housing ministry and are offered through such stakeholder groups as the Ontario Building Officials Association and the Ontario Home Builders’ Association.

Source: Professional Engineers Ontario

Industrial Exception Clouds ON Licensure

For historical reasons that remain unclear, Ontario once allowed engineers in industrial workplaces to practise without a licence. This exception was repealed in 2010 but continues to affect the profession in the province to this day.

The exception allows owners of production facilities to employ non-engineers to design and analyze production machinery or equipment for use in the employer's facilities making products for the employer. The exception is contained in section 12(3)(a) of the *Professional Engineers Act*.

The industrial exception has been in force since 1984. Ontario is the only province in Canada with such an exception.

PEO Council established the Repeal of the Industrial Exception Task Force (RIETF) in September 2010 to help industry prepare for a post-industrial exception regime and to alert the manufacturing and processing industry as to what may be at stake.

PEO originally requested government consideration for the repeal to take effect five years after Bill 68 received royal assent in October 2010. However, the province is seeking a shorter implementation period and has charged PEO with the task of alerting and assisting companies and employees to the upcoming change.

Repeal of the exception supports creation of a national

framework where all Canadian jurisdictions have the same requirements in the public interest.

Throughout 2011, members of the RIETF have identified and informed more than 110 industry associations and more than 6,000 facilities in Ontario.

The RIETF has clarified for industry the definition of professional engineering work and the right to the engineer title. Through industry letters, 21 public presentations across Ontario in partnership with PEO chapters, over 15 meetings with employers, a published guideline and journal articles, the RIETF is bringing more awareness of the repeal and the ways to come into compliance. As such, the task force looks to find creative ways to simplify the licensing process and allow companies and individuals to establish compliance plans to facilitate a smooth implementation of this change.

The RIETF hopes to identify those people who currently do professional engineering work relating to production machinery in their employers' facilities and who do not hold a licence to practise professional engineering. The task force is looking to work with these people and their employers to put together a plan for how they can either become licensed or work under the supervision of a professional engineer or a limited licence holder.

Source: *Professional Engineers Ontario*



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www2.uregina.ca

Education is Our Buffalo

First Nations elders often signify how important education is to their communities by calling it their buffalo. Education of Aboriginals is important to APEGGA, too. In fact, in January, in an historic signing ceremony, the Association joined forces with Treaty 8 First Nations of Alberta to create new pathways of learning for Aboriginal youth to follow.

Both organizations have a shared vision to increase the number of First Nations people in the engineering and geoscience professions. The agreement sets a target of 6 per cent of the membership — the same percentage as Aboriginals in Alberta's population. APEGGA's current goal is to have 2 per cent of Aboriginal people in the professions by 2030. Even that is a huge step, boosting Aboriginal membership all the way to 1,200 from a number estimated today at less than 100.

With a shortage of professional engineers and geoscientists forecast in Alberta and across Canada, Aboriginal youth represent an untapped labour pool. The memorandum aims to expose First Nations youth to careers in engineering and geoscience. APEGGA and Treaty 8 will actively seek opportunities to co-operate and work together towards the goals of the memorandum, said APEGGA President Jim Smith. One of these goals is open communication between Treaty 8's Alberta schools and APEGGA's outreach volunteers. In addition, APEGGA will sponsor opportunities in the region, such as a traditional science fair being held March 20-21 in Driftpile, and teacher education awards. APEGGA will also share outreach print resources and online career materials with Treaty 8 educators.

Source: *The Association of Professional Engineers, Geologists and Geophysicists of Alberta*



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The Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) sets and maintains the standards of licensure and professional practice of its over 26,000 members.

CEO AND REGISTRAR DEREK DOYLE, P.ENG. ANNOUNCES RETIREMENT BURNABY, BC

APEGBC wishes to advise that CEO and Registrar, Derek Doyle, P.Eng., has announced his decision to retire effective December 2012. Doyle joined APEGBC in January 2007 after 40 years of broad experience in industry, consulting and government.

During his tenure with APEGBC, Doyle has been particularly pleased to have witnessed several transformative programs grow and advance including the Association's Professional Renewal Program, growing collaborative relationships with government at the technical, executive and political levels, and developing a robust and living Strategic Plan that provides better transparency and accountability.

APEGBC's Council appointed a Search Committee comprised of current and past Council members to start the process of looking for a successor. Details regarding the confidential application process will be announced shortly.

For more information, visit www.apeg.bc.ca

 Professional Engineers
and Geoscientists of BC

News From The Field



Daily Commercial News

Province seeks Irish workers

The Cork Independent - The difficult-to-pronounce Canadian province of Saskatchewan is seeking Cork people to work in construction, technology and other industries in a major recruitment drive spearheaded by its premier, Brad Wall, who visited the city.

At a Canadian recruitment expo, Saskatchewan officials stated that the province will require between 75,000 and 90,000 skilled workers in the next three to five years to meet labour market demands.

The Saskatchewan delegation said the province is recruiting primarily for construction and trades, engineering, health care and health sciences. The 27 businesses participating in the mission, which also visited Dublin, are looking to fill more than 275 vacancies.

Saskatoon StarPhoenix – One expo participant is Allnorth, which focuses on work on mining, oil and gas, pulp and paper, and infrastructure. One reason they joined this particular trip is that engineers from Ireland have a relatively easy time getting their education and work experience recognized.

“All they need when they come to Saskatchewan is one year of experience within Saskatchewan before they can get their professional engineering designation here,” the company’s Saskatoon division manager Bruce MacFadden said.

Allnorth’s Saskatoon office opened in 2010 and has already grown to 35 people in two years. And they would be expanding further if they could find the skilled labour.

“It is the only thing that is holding us back. It is certainly not a shortage of work,” MacFadden said.



www.Reginasenes

Canada’s dependence on engineering construction will alter labour markets

Daily Commercial News and Construction Record - CanaData, the statistics-gathering and forecasting division of Reed Construction Data, is projecting a recovery in Canada’s industrial/commercial building starts after an abysmally low year in 2011. However, it will be a slow recovery: CanaData is currently forecasting commercial starts in 2012 to be 31.0 million square feet, moving up to 39.5 million in 2013 and 43.0 million in 2014 (as compared to 92.1 million in 2007).

The nature of the Canadian construction market is undergoing a transformation. Engineering work is now carrying the major part of the load. The types of projects that have caused the engineering series to climb so dramatically have been mainly in the energy sphere.

In CanaData’s *Forecaster* newsletter each month, there is a list of the 10 largest upcoming projects in a rotating list of classifications. The engineering component was nearly \$100 billion. The implications of what the future holds for engineering construction are enormous. Finding the labour to do the work will become an increasingly hot topic in the years ahead.

Immigration policies are increasingly being fine-tuned to target people who can gain employment quickly. It should be noted, however, that immigration may offer diminishing opportunities. Canada isn't the only country with a looming labour shortage. Populations are also growing older in many other countries. Enticements offered by foreign firms to keep their workers at home are likely to be raised as well.

An additional answer will be to tap underutilized segments of our own domestic labour force. For example, in Canada, this will mean attracting and training more workers from the Aboriginal community.



www.pnwer.org

SIAST to launch mining “engineering” program

CBC News - People who want to work in the province's burgeoning mining sector will soon be able to go to the Saskatchewan Institute of Applied Science and Technology for training.

SIAST is adding a mining engineering and technology program at its Kelsey campus in Saskatoon. Students will get hands-on training in things like mine ventilation and mine safety and communication.

Jamie Hilts, SIAST's Dean of Technology, said the program is the first of its kind and will help address the labour shortage in the province's mining sector.

The new program launches in the fall.

URANIUM AND NUCLEAR

\$30 million for SK nuclear research centre

Nuclear Engineering International - The Government of Saskatchewan has signed a multi-year agreement to provide funding for a new \$30 million Canadian Centre for

Nuclear Innovation (CCNI) at the University of Saskatchewan.

The CCNI will fund research and development projects and oversee the nuclear facilities on the University of Saskatchewan campus such as the cyclotron.

Research at the centre will focus on nuclear medicine, material science, safety and small reactor technology. The CCNI expects to issue a call for proposals in spring 2012. Local researchers can partner with outside industry, academics, and governments to submit project proposals, which will then be peer-reviewed and evaluated.

The Saskatchewan government has stated that the facility “will play a vital role in advancing [the Saskatchewan government's] vision for a safe, responsible, value-added nuclear agenda that focuses on nuclear medicine, material science, safety and small reactor technology.”

ENERGY

Solar research at U of S gets a boost

Prince Albert Daily Herald – The development of cheaper, tougher and more efficient solar cells has received a monetary boost.

Researchers at the University of Saskatchewan were awarded \$492,000 earlier this year by the federal Natural Sciences and Engineering Research Council (NSERC).

One of the greatest challenges regarding the development of solar energy is that there is a fundamental theoretical limit of efficiency possible with solar cells, which is about 33 per cent efficiency.

The current challenge with solar panels is that they do not absorb all of the light (energy) that touches them. Because of this, enormous amounts of energy are lost.

Researchers at the University of Saskatchewan are working to take those low-energy cells and improve their capacity to absorb energy.

Specifically they are working to make organic cells capable of absorbing and processing near-infrared rays, which would ordinarily be transferred (ineffectively) through the photons.

The potential for solar power to impact Saskatchewan and compete with other widely used forms of energy production, such as natural gas, is significant.

Saskatchewan receives 4.9 kilowatt hours per square metre. In contrast, the 80-megawatt Photovoltaic Power Plant in Sarnia, Ont., receives about 4.4 kilowatt hours per square metre.

Canada presses for crackdown on coal

Edmonton Journal - Environment Canada has issued draft regulations to crack down on pollution from coal-fired electricity plants.

The department also has identified the oil and gas sector as a “priority” in the next step of its climate change plan to reduce greenhouse gas emissions, according to the briefing notes which suggest draft regulations in that booming sector could be introduced this year.

Environment Canada notes that two-thirds of coal-fired generation in the country, or 31 plants, would be closing or coming to the end of their economic life by 2025, while 17 plants would close within the next three years.

The department fears that, absent government regulation, industry may build new coal-fired units, which would increase the cost of future emissions reductions.

Environment Canada’s published analysis of the draft regulations estimates the federal government will spend about \$13 million over 15 years to enforce the regulations and monitor compliance.

It also projects increases in consumer electricity rates over 16 years in Alberta, Manitoba, Nova Scotia and Saskatchewan, ranging from \$0.73 per month up to \$2.14 per month, depending on the province.

But the briefing notes touted benefits from “significant reductions” in both greenhouse gas emissions and air pollution.



Wind farm planned for rural Saskatchewan

North American Windpower magazine - Algonquin Power Co. (APCo), will build a 177 MW wind project as a result of SaskPower’s request for proposals.

The Chaplin Wind Project will be located in the rural municipality of Chaplin, located 200 km west of Regina. The wind farm, which will consist of approximately 77 multi-megawatt wind turbines, will be constructed at an

estimated capital cost of \$355 million. Construction completion is targeted for December 2016.

According to Algonquin, the Chaplin Wind Project enjoys an excellent wind resource and will satisfy the energy needs of approximately 70,000 homes.

The energy generated by the project will be sold under a 25-year power purchase agreement between SaskPower and APCo’s wholly owned subsidiary, Windlectric Inc.

INFRASTRUCTURE



Saskatoon awards \$45M contract for skywalk

Saskatoon StarPhoenix - The City of Saskatoon has awarded one of the largest construction contracts in its history to Graham Construction and Engineering, a \$45-million project to build a new water reservoir—and an elevated skywalk—across from the Avenue H water treatment plant.

A 30-year plan completed for the city identified the need for more storage capacity to stop the water treatment plant from increasing the volume of water it pumps out through the day, which strains the plant’s infrastructure.

The extra capacity will mean the plant can run at a steadier rate during periods of heavy water demand such as summer irrigation.

The capacity of the city’s three water reservoirs—Avenue H, Acadia Drive and 42nd Street—is 109.1 million litres or 84.3 million litres when the minimum levels for the fire department are accounted for.

The new reservoir facility will add 15 million litres of capacity. The contractor will also build an elevated pedestrian skywalk on Avenue H from the water treatment plant to the new reservoir, a pump station and an ultra-violet facility.

The contract is \$10 million higher than the city’s initial

budget. The higher-than-expected bids were a result of a labour shortage and increasing construction costs in Saskatchewan, including higher than expected costs for concrete, electrical, instrumentation and controls components.

One dam report ...

Alameda Dam

PennEnergy magazine - The Saskatchewan government will re-examine the safety of Alameda Dam after a period of unprecedented flooding in 2011. The province has contracted engineering firm Klohn Crippen Berger Ltd. “to conduct further investigations and analyses,” according to a release.

The 43-metre-tall Alameda Dam was constructed in 1995 and supplies water to both Saskatchewan and North Dakota.

Questions about the dam’s condition were first addressed in a study conducted by the Saskatchewan Watershed Authority in October 2011. This review will be used to develop a 10-year infrastructure renewal plan for the province’s water management structures.

The provincial government asked the Saskatchewan Watershed Authority, which operates the dam, to inspect all dams affected by high water levels and high water flows in 2011. These special inspections were designed to identify any immediate actions needed as a result of unprecedented runoff and rainfall.

Although the review noted minor damage related to 2011 flooding at several dams, the overall conclusion was that Saskatchewan’s water management infrastructure performed well under challenging circumstances in 2011. The government provided the authority \$1.9 million in 2011 for urgent repairs that were identified.

Overall the review found no substantive reduction in the safety of the authority’s dams occurred as a direct result of the flooding in 2011. However, the review does suggest that upgrades are required over the long term to ensure water management infrastructure remains safe and effective for decades into the future.

... after another

Gardiner Dam

CBC News - A review of how Gardiner Dam handled flooding last year says changes are needed to prevent similar problems in future – including adding more water gauges.

The 117-page University of Saskatchewan Centre for Hydrology report said that the dam’s minimum levels have

been growing over the years and that means the potential for flooding is high if estimates of inflows are not accurate.

As it turned out, the report says, the estimates in 2011 were not good.

Part of the problem is a lack of hydrometric stations measuring outflows from the dam. A map provided with the report shows how water gauges in the Saskatchewan River watershed are distributed in Alberta and Saskatchewan — and it shows the vast majority are on the Alberta side.

The report said the flooding wasn’t the fault of Saskatchewan Watershed Authority staff, whom they said did a “superb job” given the tools that were available to them.

The new gravel pits

Journal of Commerce - The City of Regina has contracted PSI Technologies to obliterate its three-year store of discarded concrete and asphalt for re-use as aggregate fill in municipal waterworks and road projects, as part of the city’s New Waste Plan for a Greener Regina.

The plan keeps old concrete and asphalt out of the city landfill, and creates a ready supply of low-cost, local and ample aggregate fill for future projects.

Most of the material comes from old sidewalks, roads and buildings.

Not only are the cost-saving and “green” benefits palpable, but according to Les Malawski, P.Eng., manager of the asphalt production and materials engineering branch of Public Works Regina, the self-generated supply is becoming increasingly important to the municipality.

Gravel pits, normally considered economically feasible to be within 100 kilometres of the city, are being raided by potash and construction companies as production, exploration and building booms across the province.

Malawski referred to the stockpiles of recycled materials as the gravel pits of the future, at least for municipal use.

The city mostly uses the crushed concrete to backfill waterworks trenches after water line repair and as a base in road repair work.

“The real advantage of the crushed concrete is its ability to absorb moisture in the trench. There’s always a little bit of active cement left in the mixture too, so by sucking up whatever moisture will be left in the trench and around the pipe, it creates a nice dense pack that’s basically impermeable,” he said.

Rebar material is sent to the Evraz foundry and turned into slag.

MINING

Chief worried potash mine may cause flooding

CBC News - A Saskatchewan First Nation in the Qu'Appelle Valley is raising concerns that future potash developments could cause flooding. Pasqua First Nation Chief Todd Peigan is concerned in particular about Brazilian mining giant Vale's request for water.

Vale wants to build a 70-kilometre water pipeline from Katepwa Lake so it can pump about 40 million litres of water a day to its proposed potash mine near Kronau, Sask.

The project will require 1,500 workers for construction and another 500 to work on site when the mine is operating.

Peigan's concern is how water being drained out of the lake will affect the river that runs through the reserve. He says neither the province or Vale have adequately consulted them, so the band's lawyer is sending letters to both.

Vale hopes to be producing potash by 2015. The provincial body that regulates water says the proposal will not result in flooding.

Miners say some provinces corrupt

Globe and Mail - Most of Canada is more corrupt than Botswana and Chile when it comes to mining, according to a survey of mining companies worldwide.

The Northwest Territories, Nunavut, Quebec, Manitoba, British Columbia and Alberta – which represent almost three-fourths of Canada's land area – were judged to have greater corruption than some African or Latin American countries, the survey by the Fraser Institute showed.

Saskatchewan was seen as Canada's least corrupt region as well as being one of the least corrupt areas in the world.

The annual survey by the Vancouver-based institute was sent to about 5,000 mining companies around the world, and the results were based on 802 responses. The survey took place between October and December last year.

All of Canada's provinces and territories were in the least corrupt half of the 93 regions that were evaluated. Still, up to 20 per cent of respondents perceived at least a "mild deterrent" to mining exploration in some areas of the country due to corruption problems.

Vote okays exploration on SK First Nation

Regina Leader-Post - Voters on central Saskatchewan's Muskowekwan First Nation have given their okay to a historic proposal to designate lands for exploration for potash – and a possible mine.



Vancouver-based Encanto Potash has been drilling for deposits on the First Nation for several years. The vote allows the First Nation's council to apply to Aboriginal Affairs and Northern Development Canada (AAND) to move "to the lease stage," a process that requires environmental studies and could take several years.

The vote asked members of the first nation, located near Lestock, if they agreed to subsurface leasing of Muskowekwan pre-reserve and reserve lands so exploration for minerals could take place.

Pre-reserve lands are those that have been designated for reserve status but have not yet been transferred to full reserve status. The recent vote covered 27,600 acres of treaty land entitlement lands and 15,700 acres of pre-reserve land.

UNIVERSITIES AND RESEARCH

Engineering faculties get boost

Regina Leader-Post - The engineering faculties of Saskatchewan's two universities will split a special \$7-million SaskPower grant to help them train the next generation of engineers for the Crown corporation.

In the next decade and beyond, SaskPower will need substantial numbers of engineers to not only build its new low-emission Boundary Dam 3 generating plant near Estevan, but upgrade other plants and its transmission lines across the province.

Because of recent population and industrial growth, electrical demand in Saskatchewan recently has growing at about twice the historical average.

This financial partnership is intended to help the universities establish research chairs to help them train students to replace engineers nearing retirement.

At the U of R, this partnership will support engineering students and research into carbon capture technology to be used in the \$1.24-billion Boundary Dam 3, formally called the Boundary Dam Integrated Carbon Capture and Storage Project.

The U of R's vice-president of research noted the university recently created a "clean technologies institute" that also looks at the use of hydrogen and windpower, and hopes to build on the partnership to take local technology to international markets.

The dean of engineering at the University of Saskatchewan, Dr. Ernie Barber, P.Eng. said the funds will establish a faculty research chair focusing on electrical power systems, a field that has gained a high profile since the 2003 blackout that left northeast North American without power for several days.



U of S: Human activity bigger threat than climate change for drinking water

University of Saskatchewan - Human activity is likely a greater threat to coastal groundwater used for drinking water supplies than rising sea levels from climate change, according to a study conducted by geoscientists from the University of Saskatchewan and McGill University in Montreal.

Grant Ferguson, P.Geo. from the U of S Department of Civil and Geological Engineering worked with Tom Gleeson from McGill's Department of Civil Engineering to examine data from more than 1,400 coastal watersheds. What they found was that with the exception of very flat coastal areas that can be inundated with sea water – rare in North America – most coastal aquifers are relatively unaffected by rising sea level.

What does appear to affect these aquifers is humans pumping water from wells for drinking, domestic use and irrigation.

"Coastal aquifers are very vulnerable to increased water demand so we have real policy opportunities," Gleeson says.

"We can reduce consumption of groundwater in coastal areas or manage groundwater use wisely."

It is estimated that one billion people worldwide live in coastal areas, and many are dependent on groundwater. In Canada, about 25 per cent of people rely on groundwater, with some areas almost totally dependent on the resource.



Calgaryherald.com

Oil sands reclamation research

Canadian University Press - University of Saskatchewan professor Lee Barbour, P.Eng. has been granted a five-year, \$2.6-million Industrial Research Chair through the Natural Sciences and Engineering Research Council of Canada to study water flow in reclaimed former oil sands mine sites.

Barbour, a civil and geological engineer with more than a decade of experience in oil sands research, will head a team of six master's students, two Ph.D. candidates, two summer undergraduates and two post-doctoral fellows.

Barbour and his team will examine water flow through reclaimed and soon-to-be reclaimed land masses on mine sites in the hope of developing tools to predict water flow and contamination levels.

Oil companies are required to put in substantial efforts to make the land they mine from environmentally sustainable and safe after they finish their work, and this is what Barbour and his team will be studying.

Reclamation is something all mining companies have to deal with, but oil sands mine reclamation is a new and especially troublesome issue. Mining less conventional and more expensive oil resources only became economically viable in the mid- to late-'70s, and oil sands mines have a much longer lifespan than most other mines.



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Calendar of Events



**Saskatchewan Association of Watersheds
7th Annual Watershed Conference**
April 16-17, 2012, Moosomin, SK
www.saskwatersheds.ca/events.php

**Saskatchewan Construction Awards of
Excellence**
April 19, 2012, Saskatoon, SK
www.scae.ca

**Solution Mining Research Institute
Spring Conference**
April 22-25, 2012, Regina, SK
www.solutionmining.org

National Expert Witness Academy
April 26-28, 2012, Toronto, ON
www.advocates.ca

**Canadian Coalition of Women in
Engineering, Science Trades and
Technology National Conference**
May 3-5, 2012, Halifax, NS
www.ccwestt2012.ca

APEGS Annual Meeting
May 3-5, 2012, Saskatoon, SK
www.apegs.sk.ca

CIM Conference and Exhibition 2012
May 3-9, 2012, Edmonton, AB
www.cim.org/edmonton2012

Canadian Institute of Transportation Engineers
May, 27-30, 2012, Winnipeg, MB
www.cite7.org/Winnipeg2012

The Canadian Society for Civil Engineering 2012 Annual Conference
June 6-9, 2012, Edmonton, AB
www.csce2012.ca

**Canadian Engineering Education Association Third Annual
Conference**
June 17-20, 2012, Winnipeg, MB
www.ceea.ca/EN/index.php

**15th International Specialty Conference on Cold Regions
Engineering**
August 19-27, 2012, Quebec City, QC
www.csce.ca/2012/iccre/

**Water, Treat it Right
Western Canada Section AWWA Annual Meeting and Conference**
September 18-21, 2012, Winnipeg, MB
www.wcsawwa.net

Canadian Dam Association
September 22-27, 2012, Saskatoon, SK
www.cda.ca/cda_new_en/conferences/conferences.html

Forming Our Future: American Concrete Institute
October 21-25, 2012, Toronto, ON
www.concrete.org/EVENTS/ev_upcoming_conventions.htm

ASHRAE 7th International HVAC Cold Climate Conference
November 12-14, 2012, Calgary, AB
www.ashrae.org/events/page/coldclimate2012