Association of Professional Engineers of Yukon

Winter 2015

E-Newsletter

(as of January/February 2015)

President's Message

2014 was a very busy year and one that saw seen a number of changes within APEY. I would first like to acknowledge the hiring of Kim King as our new Executive Director. Kim previously held the position of Office

Manager for the past 8 years with APEY. She comes to us with a solid business and accounting background which along with her direct experience with APEY, has made the transition to Executive Director very seamless. The Executive Director Position was amended to place more emphasis on strategic goals for the organization and to include the administrative responsibility for registration. One of the first tasks for our Executive Director was to hire a new Administrative Assistant and I would like to take this opportunity to welcome Ms. Sara Schellenberg to the association.

APEY is successful due to the hard work of our Staff, Council, Officers and committee members as well as numerous other volunteers. I would like to recognize the current Council and Officers for their ongoing commitment to APEY.

- Rod Savoie, P.Eng. – Vice President
- Carl Friesen, P.Eng. – Past President
- Josée Peron, P. Eng. – Councillor
- Yesh Sharma, L.L. (Eng) – Councillor
- Jon Dixon, P.Eng. – Councillor
- Kirn Dhillon, P.Eng.- Councillor
- Ahmed Dagameseh, P.Eng. - Councillor
- Graham Lang, Councillor (Public Member)
- Richard Trimble, P.Eng. FEC – Registrar
- Chris Dixon, P.Eng. – Secretary-Treasurer
- Catherine Harwood, P.Eng. FEC – Engineers Canada Director

I would like to acknowledge Rod Savoie will begin a 2 year term as President and Carl Friesen will be completing his term as Past President, I will be moving into the role of Past President. I would like to take this opportunity to thank the outgoing, incoming and existing Councillors for their great commitment and dedication to APEY

APEY has a number of committees that carry out many of our ongoing functions. The committees simply would not exist without the dedicated members who sit on the committees. The following is a list of the committees and their respective chairs.

- Act Review – Carl Friesen, P.Eng.
- Audit – Elden Pfeiffer, P.Eng.
- Awards – Carol Campbell, P.Eng.
- Board of Examiners - Richard Trimble, P.Eng. FEC
- Outreach and Bridge Building – Phil Borgel, P.Eng.
- Communication – Acting Chair Jon Dixon, P.Eng.
- Continuing Professional Development – Geoff Quinsey, P.Eng.
- Discipline – Phil Borgel, P.Eng.
- History Task Force – Jack Cable, P.Eng.
- Nomination - Carl Friesen, P.Eng.
- Social – Kathleen Jarvis, E.I.T.
- Engineers Canada Women in Engineering Committee - Anja Lanz, E.I.T. (APEGBC member).

HIGHLIGHTS FROM 2014

That past year has been a very productive year for APEY the following is a summary:

Strategic Plan - The plan is current through 2015 however Council reviewed and renewed the plan in Spring 2014.

Canadian Framework on Licensure (CFL) now called Framework for Regulation

- The Standard of Professional Conduct was reviewed
- In April 2014, the process underwent an internal review, as directed by Engineers Canada CEO. The consensus after the completion of the review was to continue moving forward with this initiative.

Executive Director and Administrative Assistant – both position profiles were updated and approved and the positions staffed.

Social Events – APEY hosted both a summer golfing social and a winter curling social event. Both were well attended and lots of fun.

Yukon-Stikine Regional Science Fair Project – This is a new Outreach initiative to create an award for a grade 5 or 6 project completed by a team that exemplified cooperation and teamwork in the completion of their project. The $150 prize will be awarded annually at the Science Fair.

Awards Luncheon – This annual event was held in June 2014 during which the following award winners were acknowledged:

- Opus Dayton Knight Consultants Ltd. winners of the 2014 Award for Engineering Excellence for their Carcross Water Treatment Plant submission.

- Carl Friesen, P.Eng., awarded the designation “Fellow of Engineers Canada” for his service to the professional engineering association as Vice President 2010, President, 2011 and 2012, Past President, 2013 and 2014
- Robyn Fortune, recipient of the 2013 Association of Professional Engineers of Yukon (APEY) Jim Y.C. Quong Memorial Education Award
- Cody Reaume, the recipient of the 2013 Association of Professional Engineers of Yukon (APEY) John D. Scott Memorial Education Award

Engineers Canada - Attendance at several events including the AGM and the Fall board meeting.

APEGBC – attendance at their AGM

APEGA – attendance at their AGM

Creation of Outreach & Bridge Building Committee - Amalgamation of Bridge Building and Outreach committees into one.

Yukon Robotics Challenge Project – APEY in partnership with the Yukon Department of Education sponsored the Yukon Robotics Challenge held on April 15th, 2014. A number of engineers volunteered to assess multiple teams of elementary students who were the first batch of student to compete in this challenge in Yukon (similar competitions are held nationwide). The theme for this event was Renewable Energy. Students built robots using Lego robotic kits with motors, logic block type programing, sensors, drive wheels (chassis). At the event they were required to show their robots completing several pre-set tasks on a “field” and a verbal interview with each

team of students was done to find out the design logic and how the group broke the project down into smaller tasks, builder, designer, programmer, documentation. All participants received a t-shirt and medals were given for the top three teams in the Field competition as well as the top three teams in the Technical competition with a final award given to the overall school champion. This very successful event allowed the students to interact with engineers. In the future (if the program continues) it may open doors for more interaction during the building stages.

History Task Force Event – A wine and cheese event was held at the APEY office on June 19, 2014 to acknowledge all the great work completed by the History Task Group and to honour the families of the five Wall of Fame members (Warren H.S. McFarland, John Livingstone Phelps, John Delbert Scott, James Yee Chow Quong and Kenneth Baker). Attendees included: Marg Baker, widow of Ken Baker, along with other family members. Willard Phelps, son of John Phelps, and his wife, the Honourable Mike Nixon, Minister of Tourism, several APEY Council members, members of the History Task Force, and other local APEY members also attended.

2014 was a very exciting and productive year for APEY. We have a great team of Councillors and staff that have very competently carried out APEY business. In 2015, we look forward to carrying out a full renewal of our Strategic Plan so that we can focus our efforts on the most beneficial priorities for the organization. The upcoming AGM will be held this year on February 18th and is a great opportunity for members to receive updates on all the business and initiatives that are happening in APEY. It is also a wonderful opportunity to meet your Council and staff and to meet other new and existing members. I would like to remind all members that the Engineering Profession Act

enables APEY, however the organization can only operate on all the great volunteer efforts of its members. I would therefore like to remind members to consider accepting a role on one of the committees or for positions on council.

It has been a great honour and a pleasure to serve as president of APEY over the past 2 years. In closing, I want to thank all of our council, staff and volunteers for the great work that they do and I look forward to continuing to serve as Past President in 2015.

Brian Crist, P. Eng. APEY President

History of Engineering in Yukon Committee Update

Last year, 2014, was a busy and productive year for the History of Engineering in Yukon Committee. One obvious change, you will have noticed, is that we graduated (with Council's blessing) from being a Task Force to a Committee. There has also been a changing of the guard, the History Committee's founder, visionary, and driving force Jack Cable, P.Eng. has stepped back from the position of Chair and handed the reins over to a tag team of Bruce Underhill and John Maissan, P.Eng.; yes it takes two people to fill Jack's shoes!

In 2014, three new display panels were produced (Research by Michael Gates and layout by Underhill Geomatics) from research work previously completed by 'The History Hunter' Michael Gates. These are ***"Venus Mines Aerial Tramways"***, ***"Early Electrical Power Generation"***, and ***"Yukon Bridges"***. We also completed a re-design of our very first panel, ***"The Yukon Ditch"***, to be consistent with the subsequent improvements, thanks to Council's allocation of this expense to the advertising budget. Keep your eyes on our website, you will soon see them there!

Michael Gates completed a major research project, including some interview based oral histories, on the Dempster Highway for us in 2014. This year a display panel will be developed from this effort. In addition to a newspaper article on early Yukon electrical power generation that will be published during Engineering Month (March 2015), Michael will prepare an article on the Dempster Highway based upon his recent research.

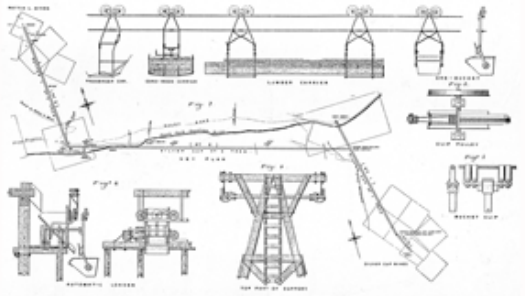
We hope to have a prominent display of our history panels in a public building during Engineering Month. Other History Committee plans for 2015 include the identification and research other prominent Yukon engineers and to

research one other topic. We would love to get your suggestions on prominent engineers and research topics! Contact the APEY office or either Bruce Underhill or John Maissan.

We invite you to visit the APEY office to see some of the display panels as well as displays honouring prominent engineers, past APEY presidents, Fellowship of Engineers Canada recipients, and winners of the APEY Yukon Excellence in Engineering Awards.

It is the mandate of APEY and the History Committee to have the “history of engineering in Yukon” display panels, viewed by as many people as possible. With this intent, APEY will make the displays available (subject to the use at APEY functions) for display in the offices of local corporate members. If you or your company wish to arrange for the use of any of the historic displays, please contact the APEY office to discuss availability.

ENGINEERING IN YUKON



THE WINDY ARM AERIAL TRAMWAYS

Construction of the tram system was designed to replace the costly transport of supplies by horse. The weight of the loaded ore carts travelling downhill was enough to allow for freight to be hauled up to the mine on the return haul.
Yukon Archives, Tyrrell Collection, Acc. # 82/15/477.

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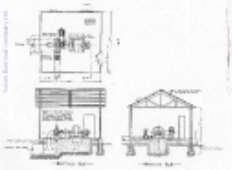
ENGINEERING IN YUKON

YUKON ELECTRICAL GENERATION



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BRIDGING YUKON'S WATERS

Above: Dempster River Bridge — Government of Yukon

Providing safe, reliable and inexpensive transportation was one of the main challenges to making mines and other operations profitable in the Yukon. Early day transportation was by foot, pack horse or, in the winter, with dog teams, all of which moved small loads of goods. Construction of wagon roads and railways allowed larger loads to be hauled over longer distances, dramatically reducing the cost of transporting goods over northern routes. But the roads would not be of much use without bridges.

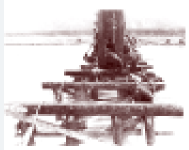
Building bridges was not easy in the north in the early days. The sites were isolated and difficult to reach. The equipment was often inadequate for the challenge. Waiting for supplies meant lengthy delays. Crews were often forced to work in conditions of extreme cold where every aspect of construction was made more difficult.

Permafrost only made the difficulties greater. The holes for pilings had to be carefully drilled – or steamed – into the frozen ground with as little disturbance as possible. The piles were greased and wrapped before installation, in order to reduce the risk of the permafrost forcing them to move. Then the ice had to be allowed to reform before insulating the ground to reduce thermal disturbance.

High water threatened many of the early Yukon bridges, often washing them away in the spring. During the construction of the Alaska Highway, the military even posted sentries to warn travellers of potential washouts.

Lacking experience with northern conditions, engineers had to improvise and develop unique building techniques through trial and error. Today, Yukon bridges are substantial structures over which hundreds of thousands of people cross without giving them a second thought.

Below: The Slims River Bridge was a 364 metre (1,195 foot) span, built of timber cut in a temporary mill set up beside the river. Only 3.7 metres (12 feet) wide, several pull-outs had to be constructed along the span so that vehicles could pass each other. This was replaced by a more substantial structure in the early 1950s. The current bridge was replaced by 2010.
Yukon Archives, [illegible]



Below: Typical cross-section of the pile construction for the Eagle River Bridge on the Dempster Highway, constructed in 1977, with special design features to address permafrost conditions.
[illegible] 1979: 140

Above: Slims River Bridge — Government of Yukon

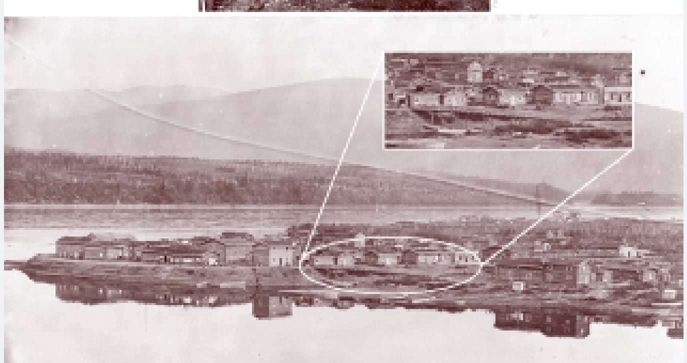
Below: The First Bridge to the Yukon was constructed before the Gold Rush at the early mining camp of Forty Mile. Built to span a backwater channel of the Yukon River, it joined the island upon which the bulk of the town was built, to the mainland surrounding it. It was washed away in the flooding that occurred in the spring of 1898.
RCMP Historical Collection, Catalogue Number [illegible]

Above: This railroad bridge at Carcross ca. 1900 was designed to swing open to allow lake and river steamers to pass from Bennett Lake to Tagish Lake.

Above and Left: The Donjek River was first spanned with a temporary pontoon bridge, which was put to use while a stronger bridge was constructed, only to be replaced again a few years later. The current concrete span was built in 2006.
Yukon Archives, [illegible]

Above: The first bridge over the Klondike River was started at the height of the Klondike Gold Rush during the summer of 1898. Designed by [illegible], a mechanical engineer from Seattle, it was financed by two men named Howard and Roberts, and constructed by local contractors [illegible] and [illegible]. Constructed as a toll bridge, it consisted of a 250 foot suspension span and 1,000 feet of trestle work.
US Geological Survey, [illegible]

Left: Early bridge building in the Yukon was never easy. Here, high runoff threatens a temporary pontoon bridge during the construction of the Alaska Highway, 1942.



Continuing Professional Development Update

Year in Review

The CPD committee maintained its targets in 2014, presenting two full-length events and one lunch & learn. In 2015, we will be continuing to fulfill on our local mandate while expanding our goals of endorsing and presenting on-line CPD material.

We have endeavoured to increase our promotion of CPD-qualifying events as-presented by other organizations both in live and digital format. We will plan on continuing this practice going-forward.

The committee was very pleased by the attendance and participation at the November 25th, 2014 Permit to Practice Seminar event, as presented by Ross Plecash, APEGA's Director of Corporate Affairs & Investigations. A big thank-you goes out to Ross for his expertise and enthusiasm,

and to APEGA for offering Ross' services free of charge.

Coming Events

The committee is working towards re-instatement of the AGM CPD event. In order to minimize delegate 'burn-out', we will intend on presenting a half-day event, or presenting a full-day event a day prior to or after the AGM.

Suggestions

As always, the CPD committee is very interested in receiving any ideas from the membership for CPD events that should be offered in the future, and any general comments on how we can improve the CPD program. Suggestions can be sent to any one of the committee members, or to the executive director, Kim King, at the email addresses below:

The CPD Committee is:

Geoff Quinsey – geoff.quinsey@stantec.com

Rod Savoie - rod.savoie@stantec.com

Ahmed Dagamseh – ahmed@dorwardeng.com

Sohail Magsi – smagsi@nwtel.ca

Registrar's Report

New APEY P. Eng, EIT, LL Eng members and Permits to Practice holders.

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