A photograph of a surveying instrument, likely a total station, mounted on a tripod in a forest. The sun is setting behind the trees, creating a warm, golden glow. The instrument is silhouetted against the bright light of the sunset. The background shows a dense forest of tall evergreen trees.

ASSOCIATION OF CANADA LANDS SURVEYORS

Annual Report

**For the year ending on
December 31st, 2017**



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The Association of Canada Lands Surveyors (ACLS) is the national licensing body for professionals surveying in the three Canadian Territories in the Federal Parks, on Aboriginal Reserves, on and under the surface of Canada's oceans. The exclusive title attributed to these professionals is that of Canada Lands Surveyor (CLS).



VISION

ACLS will be a leader and valued partner in advancing the survey profession in Canada.

MISSION

We will achieve our vision by upholding our commitment to society and our role in supporting Canadian social and economic sustainability.

We will carry out the objects of the Association as set out in the Canada Lands Surveyors Act. Acting with integrity in all things we will:

- 1) Regulate members and ensure expertise by maintaining up to date national standards, qualifications and association governance.
- 2) Advance our profession by promoting the contributions of our members in building and maintaining the lands and offshore property fabric that is the foundation of Canada; and
- 3) Foster cooperative relationships with other organizations and governments.



Welcome to the World of Land Surveying

Cadastral Land Surveying involves the measurement and creation or the retracement of boundaries between contiguous (or adjacent) parcels of land.

Surveyors apply mathematics, property law and use of the latest measurement technology to real-life situations. These professionals are enablers of industries that invest billions into the Canadian economy annually. Because of their expertise, land surveyors are required whenever there is a need to establish boundaries of new parcels of land, establish boundaries of tenure on parcels of land or to re-establish these boundaries.



The objectives of the Association are the following according to section 6 of the Canada Lands Surveyors Act:

- (a) to establish and maintain standards of qualifications for Canada Lands Surveyors
- (b) to regulate Canada Lands Surveyors
- (c) to establish and maintain standards of conduct, knowledge and skill among members of the Association and permit holders
- (d) to govern the activities of members of the Association and permit holders
- (e) to cooperate with other organizations for the advancement of surveying; and
- (f) to perform with duties and exercise the powers that are imposed or conferred on the Association by this Act.



Council Members 2017-2018



Tania Bigstone
President
Dartmouth, NS



J. Anne Cole
Past President
Sudbury, ON



Dominique Fecteau
Vice President
Mont-Tremblant, QC



G.C. (Carl) Friesen
3rd Year Councillor
Whitehorse, YT



Robert Pinkerton
2nd Year Councillor
Calgary, AB



Doug Dodge
1st Year Councillor
Williams Lake, BC



Geoffrey Connolly
Appointed by the Minister
Cornwall, PE



Leona Irons
Appointed by the
Minister
Curve Lake, ON



Jean Gagnon
Surveyor General
From August 2017
Ottawa, ON



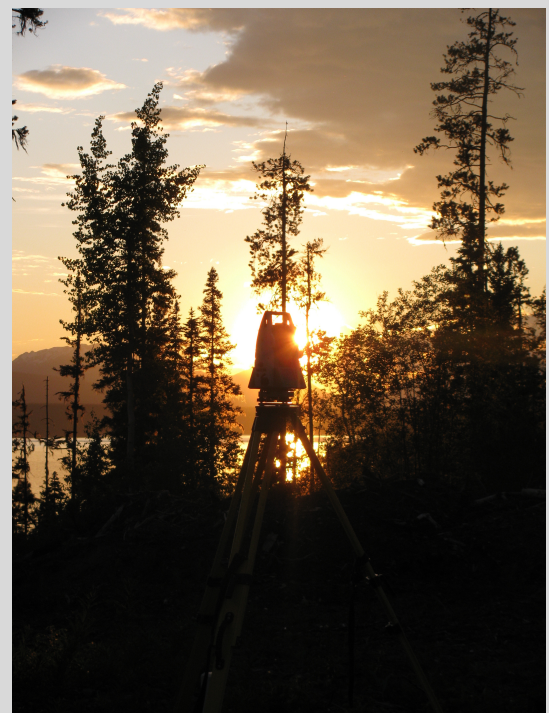
Peter Sullivan
Surveyor General
Up to July 2017
Edmonton, AB

David Thompson National Geomatics Awards

Celebrating excellence in the field of geomatics in Canada, the David Thompson National Geomatics Award was introduced in the winter of 2006-2007. The program was developed to recognize projects that exemplify the innovation and contribution to society that surveyors make every day to bring successful projects about for the betterment of all Canadians. The program has the two following categories:

- 1) Challenging Cadastral Survey Project
- 2) Challenging Non-Cadastral Survey Project

The awards were presented during the National Surveyors' Conference in Ottawa on March 2, 2017.



Challenging Cadastral Survey Project

In the category Challenging Cadastral Survey Project, the winner was Christopher de Haan of Underhill Geomatics Ltd. (pictured below receiving the award from great-great-great grandson of David Thompson, Brian Lennox) for the project entitled: "Survey of the natural boundary of the Toquana Indian Reserve # 4". Underhill Geomatics was hired to conduct a survey of Toquana IR #4 that included a boundary limit of "high tide of the Theodosia Inlet". However, the limit of the high tide was only discernible on the ground for short periods each day and was not possible to survey before the water receded. Instead, a drone was used to obtain 800 aerial photographs of the area during high tide. A Data Terrain Model was then created and the contour of the high tide was used to delineate the natural boundary.



Challenging Non-Cadastral Survey Project

In the category Challenging Non-Cadastral Survey Project, the winner was James Ferguson (pictured above) of Tulloch Engineering for the project entitled: "Engineering Survey of Metrolinx's Go Transit Electrification Project".

This project used a unique hybrid surveying approach to accommodate surveying 270 km of railway corridors that were consistently in use. This was accomplished by using mobile LiDAR, surveying primarily at night to collect visible features, followed by conventional ground surveys to fill in missing features and static LiDAR surveys for bridges inaccessible by mobile LiDAR.

CHC-NSC 2018: Land and Sea Shaping the World



The Association of Canada Lands Surveyors and the Canadian Hydrographic Association are uniting to hold a conference to pass on new technical knowledge and advancements in the field of Hydrography and Surveying. This year it will be held in Victoria, BC from March 26th to 29th, 2018 at the Empress Hotel. The theme of the conference is: Land and Sea Shaping the World.

Please visit www.chc-nsc2018.ca for more details. We expect to have over 450 delegates from across Canada and from around the world to help us celebrate the accomplishments of the surveying profession and its impact on the economy of our country.



NSC 2017: Canada's Surveyors The Cornerstone of a Country



The most recent National Surveyors Conference was a historic event and a fantastic success. The Conference was held on February 28 and March 1 to 3rd, 2017 at the impressive Shaw Centre downtown Ottawa. For the first time ever, three surveying associations joined forces to create an extraordinary show to highlight the contribution of surveyors to building the greatest nation on earth during Canada's 150 years of existence. The staff of the Association of Ontario Land Surveyors, the Ordre des arpenteurs-géomètres du Québec and the Association of Canada Lands Surveyors worked hard for 2 years setting up this never to be forgotten event. A record breaking 700 delegates participated.

The opening ceremony was breathtaking. We videotaped it and it can be seen on YouTube at: https://www.youtube.com/results?search_query=National+Surveyors%27+Conference+Intro.

Act Amendments

Proposed amendments to the Canada Lands Surveyors Act and the Regulations were initiated in 2012.

The main topics addressed in the proposed amendments were:

- (a) the complaints and discipline processes of the Association;
- (b) federal labour mobility compliance (the Association is required to accept surveyors with provincial commissions for membership); and
- (c) the practices adopted by the Board of Examiners to bring its practices in line with other surveyor associations in Canada.



On 3 June 2016, all Association members were invited to comment on the proposed amendments. In early August 2016, Council approved the package to be sent to the Natural Resources Minister. The package included a letter to the Minister, an explanation of all the proposed amendments and a draft Act amending the Canada Lands Surveyors Act. The package was sent to the Minister on November 2, 2016.

Amendments to the Regulations (and By-laws) concerning the same issues as the proposed amendments to the Act were completed simultaneously with the proposed amendments to the Act. They are now on hold pending approval of the proposed amendments to the Act.

The Canadian Hydrographer Certification Program

The ACLS has developed a certification model for hydrographers and offshore surveyors, which has been officially recognized by the IHO/FIG/ICA International Board of Standards and Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) in April of 2016. Currently, 2 people have been awarded Certified Hydrographer Level 1 status. The ACLS program is the second internationally recognized scheme in the world.

Certification by a hydrographic or offshore surveyor is desirable because:

- Certification provides a formally recognized and structured career path for the hydrographic or offshore surveyor.
- Establishes the hydrographic or offshore surveyor's level of expertise and competency.
- Ensures the hydrographic or offshore surveyor is aware of the changing technologies in these sectors.
- Provides the certificate holder with an enhanced profile within their industry.
- Prepares the hydrographic or offshore surveyor for the next global expansion in these sectors.



Marine Cadastre

The ACLS has been promoting the value and need for a marine cadastre in Canada since 1996. It believes that it is in the best interest of all Canadians to have a marine cadastre in place to better manage Canada's offshore zone.

A marine cadastre is "A marine information system, encompassing both the nature and spatial extent of interests and property rights, with respect to ownership and various rights and responsibilities in the marine jurisdiction." (Nichols, S. et al, 2000).

The ACLS has been following up on the advancement the joint Natural Resources Canada-Fisheries and Oceans Canada pilot project to build a Marine Geospatial Data Infrastructure (MSDI) in three small areas in Canada. The ACLS Offshore Committee recently received a demonstration of the tools developed for MSDI. The project seems promising but a lot of work is still needed. Our hopes are that Federal Government officials will appreciate the value for Canada of such a vital decision making tool to manage its ocean space and provide the funding to go ahead with implementing a marine cadastre at least in areas with the most activity.



GeoEd Distance Learning Portal

Recognizing the geographically diverse nature of surveyors across Canada, the ACLS is enhancing the delivery of continuing professional development through distance learning initiatives. This includes courses offered through partnership with sister associations, academic institutions, government, and private companies and all available through the GeoEd portal.

The GeoEd portal is currently being filled by on-line courses on a variety of topics that are available at the click of a mouse. At this time there are over 130 courses available on GeoEd. These courses include live, interactive webinars but most courses are fully self-study with recorded video and other digital materials. Surveyors are able to sign up for any course and complete it at their leisure.

GeoEd is well on its way to becoming the tool that surveyors across Canada will use to make educational opportunities as easy and accessible as possible. Please visit GeoEd at: www.geoed.ca.

Scholarship Winners

Every year ACLS Foundation awards scholarships of \$1,750 to students enrolled in a postsecondary institution in the field of Geomatics. This year, the committee chose the following recipients from many promising applications. Congratulations to the winners and thanks to all applicants!

Winners of this year's ACLS scholarship:

- Czarina Marquez, British Columbia Institute of Technology
- Mason Gray, University of New Brunswick
- Justin Collett, University of New Brunswick
- Noah Whitenect, University of New Brunswick.

Canadian Board of Examiners for Professional Surveyors (CBEPS)

The ACLS continues to provide the administration and registrar services for the Canadian Board of Examiners for Professional Surveyors. The ACLS has a strong core competency in the fields of candidate management and examinations and wants to continue to make these resources available to the whole surveying community.

Pathways to Credential Recognition of Foreign Trained Land Surveyors

Canadian professional land surveyors are made up of 11 self-regulated professional land surveying associations across Canada, each with its own legislation and legal responsibilities. As a result, there is currently a variety of processes to assess the competence of Internationally Trained Professionals (ITPs) but no Canadian central point of contact for ITPs to obtain information and apply for credential recognition as a professional land surveyor in Canada.

The ACLS was successful in obtaining funding from Employment and Social Development Canada through the "Foreign Credential Program" and is currently at the project startup phase. The project is expected to be completed in the spring of 2019. The proposed project will not only investigate these matters, it will present the surveying associations with the best-case scenario for a decision which could then be implemented through a Web portal designed for foreign professionals that will provide information on the surveying profession in Canada and a roadmap for credential recognition in the various Canadian jurisdictions. It will provide all the tools required for foreign professionals to perform a self-assessment of their own credentials and what is missing and how to fill the gaps to become certified as a professional land surveyor.



At the same time, the process will provide a single point of contact for all foreign professionals wishing to enter the surveying profession in Canada which is not available at this time. In addition, the ability of the foreign professionals to begin the process from their home country will provide them with more certainty about the process before immigrating to Canada. There will also be real possibilities that an Internationally Trained Professional may arrive in Canada with many requirements completed which may assist them in contributing to Canadian society in a shorter period of time.

This project is funded by the Government of Canada's (Foreign Credential Recognition Program).



Complaints and Discipline

The most important role of the ACLS is to protect the Canadian public and the cadastral fabric.

Since the last ACLS report, it had to deal with two complaints. Complaints Case 16-01 was closed last summer with a decision of the ACLS Discipline Committee delivered on June 23rd, 2017. The member in question, who is in private practice, was found guilty of professional misconduct and was ordered the following penalties:

- suspended licence to practice for a period of two months
- pay half of the cost of the investigation and discipline hearing
- take all required steps to fix any remaining problems with the survey that raised the complaint and
- take courses in quality assurance.

The firm that employs the member, was directed to:

- pay a penalty of \$5,000
- take all required steps to fix any remaining problems with the said survey and
- pay the remaining half of the cost of the investigation and discipline hearing.

The other complaint against another member in private practice was dismissed lacking any evidence of incompetence or professional misconduct following an investigation by the ACLS Complaints Committee.



Survey Cost Study

In response to a presentation made at the National Surveyors Conference in Winnipeg (2015), concerning the costs of surveys on First Nation lands, the Association of Canada Lands Surveyors (ACLS) together with individuals from the Departments of Indigenous Affairs and Northern Development (INAC) and Natural Resources (NRCan) formed a Survey Cost Working Group.

The Group hired a consultant to conduct a study that has the following objectives:

- Determine the key drivers of survey costs with respect to parcel and jurisdictional boundaries on First Nation Reserve Lands in Canada.
- Based on data acquired in the project, deliver a set of recommendations to address the key issues identified.
- Report will serve as an educational tool to key stakeholders involved in survey projects (i.e. First Nation land managers, INAC staff, etc.), who may not be familiar with all aspects of a survey and the associated costs.

The ACLS received and reviewed a first draft of the report from the consultant. At this time, work is being done to complete the report, which is expected in early 2018.

