



**THE ASSOCIATION OF CANADA LANDS
SURVEYORS**

2016-2017 ANNUAL REPORT



Photo by: Patrick Burnham

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ASSOCIATION OF CANADA LANDS SURVEYORS

ANNUAL REPORT

FOR THE YEAR ENDING ON MARCH 1st , 2017

INTRODUCTION

The Association of Canada Lands Surveyors (ACLS) is a national self-regulating professional association. It has 609 members located across Canada (and the world) who have expertise in surveying, photogrammetry, remote sensing, geodesy, hydrography, and land information systems. Licensed Canada Lands Surveyors (CLS) are the only ones authorized by the Canada Lands Surveyors' Act to perform cadastral surveying on Canada Lands, which are formed by the offshore area that is not under provincial jurisdiction, all lands in the three Territories, Aboriginal Reserves and National Parks.

Canada Lands Surveyors are experts in spatial positioning and property rights systems by providing:

- Advice and consultation on surveying, boundary matters, mapping, land registrations, land information systems, photogrammetric surveys, hydrographic surveys, remote sensing applications, and implementation of geographic information systems
- Property surveys, land descriptions, and construction surveys
- General advice and consultation on all land administration and land management matters.

The CLS is the key player in the Canada Lands Surveys System which provides the framework for the identification, documentation, registration, and protection of land interests which impact economic growth, social and cultural preservation, and environmental protection by:

- Providing certainty and stability
- Increasing investment in property and resource exploration
- Increasing access to capital
- Improving land markets
- Providing a base for taxation aiding self-sufficiency
- Reducing disputes
- Increasing employment opportunities
- Supporting self-governance
- Assisting in environmental management
- Aiding land use planning and control
- Supporting community development particularly on Reserves with regards to homeownership
- Supporting economic development by third party providers and leaseholders' interests on Reserve.

ACLS COUNCIL

The leadership of the Association is provided by a Council which is a mix of elected and appointed individuals from across the country. The ACLS Council for the 2015-2016 term was formed by the following people:

POSITION	NAME	HOME
President	Tania Bigstone	Dartmouth, Nova Scotia
Past President	J. Anne Cole	Sudbury, Ontario
Vice President	Cameron Twa	Yellowknife, Northwest Territories
3 rd Year Councillor	Dominique Fecteau	Mont-Tremblant, Québec
2 nd Year Councillor	Carl Friesen	Whitehorse, Yukon
1 st Year Councillor	Robert Pinkerton	Calgary, Alberta
Appointed by Minister	Geoffrey Connolly	Cornwall, Prince Edward Island
Surveyor General	Peter Sullivan	Edmonton, Alberta

Council's priorities in the last year were the following:

- Add more distance learning courses to the GeoEd portal for ACLS members and other surveyors across Canada.
- Update the CLS candidate study material.
- Work in collaboration with the Surveyor General Branch of Natural Resources Canada to enhance the MyCLSS system (see section on Plan Review Checklist) in order to increase its functionality, improve the user experience, and allow for filing electronic copies of survey documents.
- Draft proposed amendments to the Canada Lands Surveyors' Act and the Canada Lands Surveyors' Regulations to improve the ACLS Complaints and Discipline process and be compliant with the Agreement on Internal Trade in Canada.
- Present a submission to the FIG/IHO/ICA International Board on Standards of Competence of Hydrographic Surveyors and Nautical Cartographers (IBSC) to obtain its recognition of the ACLS Hydrographic Surveying Certification Scheme.
- Look into options to improve the Associations financial situation in view of declining and volatile revenue streams.
- Develop a proposal to obtain funding from Employment and Social Development Canada (ESDC) through the Foreign Credential Recognition Program to develop tools to improve the assessment process for Internationally Trained Professionals at a national level to enter the surveying profession.

STAFF

The Association of Canada Lands Surveyors staff is composed of four full time employees and one part time contractual position led by Jean-Claude Tétreault, CLS, a.-g., MBA, Executive Director and Registrar.

MEMBERSHIP, COMMISSIONS, LICENCES AND PERMITS

1. MEMBERSHIP

On May 5th, 2016 the Association membership stood at a total of 597, which included 440 regular members, 7 honorary life members, 85 retired members, 6 associate members, 58 student members, and 1 honorary member.

2. COMMISSIONS

Nine new commissions have been presented since May 15th, 2015.

3. LICENCES AND PERMITS

On May 5th, 2016, 348 ACLS regular members held a valid license to practice and 167 firms held a valid permit.

4. CANDIDATES

Twenty individuals were admitted as new candidates for a Canada Lands Surveyor Commission between May 15th, 2015 and May 5th, 2016. At present there are 135 CLS candidates registered with the ACLS Board of Examiners.

COMMITTEES AND TASK FORCES

In addition to its statutory committees who manage critical tasks such as entry to the profession and our complaints and discipline process, the ACLS counts on twenty two committees of volunteers who perform the bulk of the work for the Association in respect to liaison with indigenous organisations, continuing professional development (CPD) of membership, offshore challenges, professional standards, and public awareness to name a few.

HYDROGRAPHIC CERTIFICATION SCHEME

The fall 2014 Report of the Commissioner of the Environment and Sustainable Development concluded that there is: “a significant gap in the area of surveying and charting—a foundational requirement of safe navigation. While some surveys and charts are improved each season in the Arctic, many higher-risk areas remain inadequately surveyed and charted, and capacity to conduct this work is limited”.

The Canadian Hydrographic Service (CHS) of the Department of Fisheries and Oceans will have to depend on private industry to help in the survey and charting of the high-risk areas of the Arctic. The ACLS has been aware of a need for capacity building in the field of hydrography for a long time and has worked on building a program for the certification of hydrographic surveyors since 2002.

The ACLS has developed a certification model for Hydrographers which was officially recognized by the IHO/FIG/ICA International Board of Standards and Competence for Hydrographic Surveyors and Nautical Cartographers (IBSC) in April of 2016 and is now ready to receive applications. The ACLS program is the second internationally recognized scheme in the world. The program is designed to promote IBSC-Accredited Category A or B training in Canada, while standardizing knowledge and experience requirements for individuals possessing non-accredited hydrographic surveying training and experience. The ACLS Certification program is open to both ACLS-Commissioned and non-commissioned hydrographic and offshore surveyors in Canada and abroad.



The ACLS Executive Director Jean-Claude Tétreault on the left being congratulated by the IBSC Chairman in Brest, France.

The « Centre interdisciplinaire de développement en cartographie des océans (CIDCO) » in Rimouski, Québec obtained the IBSC Category B recognition of its Hydrographic Surveying program by the IBSC in 2015 and the Marine Institute in Newfoundland obtained the IBSC Category B recognition in April 2016. This is great news for the hydrographic surveying profession in Canada. The next logical step in the career path for graduates of those programs is professional recognition by a national body, so the ACLS certification is a straightforward choice.

COMPLAINTS

In April of 2016, the ACLS received a formal complaint against one of its members and a permit holder. The ACLS Complaints Committee is presently investigating the complaint in accordance to section 24 of the Canada Lands Surveyors Act.

CONTINUING PROFESSIONAL DEVELOPMENT

The ACLS introduced mandatory Continuing Professional Development (MCPD) on January 1, 2011 to fulfill its role of making sure that its members are current in their knowledge and skills in their particular fields. To keep track of CPD activities, ACLS members have to enter information on their learning activities into a web based database system which is monitored by the ACLS staff to verify that the minimum requirements are met to maintain their licence to practice.

The ACLS MCPD tracking system is very popular with other surveying association for its ease of use by participants. So much so that the Association of Ontario Land Surveyors has adopted the ACLS system and made some minor modifications in line with their specific requirements.

The Association of British Columbia Land Surveyors decided on another approach. Since many of the its members are also ACLS members, why not allow its members to enter information on CPD activities only once and data would be accessible by both the ACLS and ABCLS, eliminating individuals having to enter data twice? So in 2016, one MCPD Tracking System was implemented on the GeoEd portal (see next section) for use by ABCLS and ACLS members.

Our hope is to eventually have one national tracking system for all surveyors in Canada.

GEOED DISTANCE LEARNING PORTAL



Recognizing the geographically diverse nature of our membership, the ACLS is enhancing the delivery of CPD 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.

GeoEd is a collaborative initiative that seeks to include all provincial and federal surveying associations in Canada to promote accessible continuing professional development. The initiative was conceived and developed by the ACLS for the benefit of all surveyors in Canada and is financially self-sufficient. ACLS continues to maintain the portal in what will hopefully become a cooperative effort to share resources and expertise towards the development of national learning. Other surveying associations (Association of British Columbia Land

Surveyors, Alberta Land Surveyors' Association, Association of Ontario Land Surveyors, Association of Nova Scotia Land Surveyors, Association of Prince Edward Island Land Surveyors, Ordre des arpenteurs-géomètres du Québec and Professional Surveyors Canada) have joined GeoEd as registered providers as well as private enterprises.

The GeoEd portal is currently being filled by on-line courses on a variety of topics that are available at a click of the mouse. At this time, over 90 courses are available on GeoEd, up from only 23 courses last year, a jump of 291%.

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.

The ACLS decided to go to the next level by building a fully functional learning management system to improve the learner's experience in addition to allowing for testing. The new portal was launched last January.

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.

PLAN REVIEW CHECKLIST

The MyCLSS website which contains the ACLS electronic plan review checklist has been in operation since August 1st, 2011. The use of the system is mandatory for ACLS licence holders in the performance of surveys on Canada Lands and on private lands in the three territories.

In last year's report we mentioned that we have been working with the SGB staff since 2015, on enhancements to the MyCLSS system. MyCLSS Version 2.0 provides some added functionality and user friendliness. In addition, the new interface was developed to support the submission of digitally signed survey documents, once the regulatory framework is in place and the regulatory process approved. MyCLSS Version 2.0 was launched in January 2016.

To access the website please visit www.myclss.ca

DAVID THOMPSON NATIONAL GEOMATICS AWARDS

The Association of Canada Lands Surveyors and Professional Surveyors Canada are proud to announce the winners of the ninth annual David Thompson Awards! The awards were presented during the National Surveyors' Conference in Ottawa on March 2, 2017.

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:

- Challenging Cadastral Survey Project
- Challenging Non Cadastral Survey Project

Challenging Cadastral Survey Project

In the category *Challenging Cadastral Survey Project*, the winner was Christopher de Haan (pictured right receiving the award from great-great-great grandson of David Thompson, Brian Lennox) of Underhill Geomatics Ltd. for the project entitled: "Survey 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 discernable 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 while the elevations of the highest tide was measured. A DTM was then created and the contour of the measured elevation was used to delineate the limit of the high tide.



Runners up for this award were Derek French of Derek A. French Professional Services Inc. for the project entitled: "PEI-NB Cable Interconnection Upgrade Project" and Peter Yorke of WSP Canada Inc. for the project entitled: "ICE District".

Challenging Non Cadastral Survey Project



In the category *Challenging Non Cadastral Survey Project*, the winner was James Ferguson (pictured left) 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.

Runners up for this award were G.C. Friesen of Underhill Geomatics Ltd. for the project entitled: "Whitehorse Erik Nielsen International Airport Obstacle Limitation Surfaces Survey" and David Gurnsey of Altus Geomatics Ltd. for the project entitled: "Augmented Reality system".

The Association of Canada Lands Surveyors (ACLS) introduced the David Thompson National Geomatics Awards Program in cooperation with all professional surveying associations across Canada through Professional Surveyors Canada (PSC).

The David Thompson National Geomatics Awards Program is open to all commissioned surveyors who are members of a Canadian surveying association, submitting projects that have been completed within the last three years. The deadline for submissions is January 15, 2018.



The ACLS is a national self-regulating professional association that is the licensing body for professionals surveying in the three Canadian territories, in the Federal parks, on Aboriginal reserves, as well as on and under the surface of Canada's oceans. It has over 600 members located across Canada (and the world), with expertise in surveying, photogrammetry, remote sensing, geodesy, hydrography and land information systems. For details, please visit: www.acls-aatc.ca

Professional Surveyors Canada is conceived, developed, and run by Canadian surveyors, and is dedicated to building and enabling a strong multi-faceted community of surveying professionals committed to exceeding expectations. <http://www.psc-gpc.ca>

NATIONAL SURVEYORS' CONFERENCE

This year's National Surveyors' Conference was held in Edmonton, Alberta at the Sutton Place Hotel from May 4 to 6, 2016.



ACLS President Tania Bigstone presenting a certificate of thanks to outgoing Past President Gord Stark

The theme of this one was "Gateway North: Traversing the Currents". The following seminars were presented:

- Exploring the Coordinate Cadastre in Canada
- Providing a Foundation for Development on Indigenous Lands
- The CLS at the service of Aboriginal Communities and
- The CLS and the offshore. The new ACLS Hydrographer Certification Scheme was launched at this seminar.

The two following keynote addresses were presented:

- Denis Hains, Director General, Canadian Hydrographic Service (CHS). The position also carries the title of Hydrographer General of Canada. His topic was "Mapping for New Worlds and New Perspectives" which was a stunning multimedia presentation.

- Robert Louie, LL.B., OC, of Kelowna, B.C. is the Chief of the Westbank First Nation. Chief Louie talked to us about the success of the First Nation Land Management Initiative.

Again this year, members could attend the business meeting from their home or office through video streaming using GoToTraining. The viewer experience was better than last year.

It was our largest turnout ever for the National Conference with 153 delegates. Thank you to our sponsors, exhibitors and those who attended.

The following Council was confirmed at the AGM:

POSITION	NAME	HOME
President	Tania Bigstone	Dartmouth, Nova Scotia
Past President	J. Anne Cole	Sudbury, Ontario
Vice President	Dominique Fecteau	Mont-Tremblant, Québec
3rd Year Councillor	G.C. (Carl) Friesen	Whitehorse, Yukon
2nd Year Councillor	Robert Pinkerton	Calgary, Alberta
1st Year Councillor	Doug Dodge	
Appointed by Minister	Geoffrey Connolly	Cornwall, Prince Edward Island
Appointed by Minister	Leona Irons	Curve Lake, Ontario
Surveyor General	Peter Sullivan	Edmonton, Alberta

NSC 2018: LAND AND SEA SHAPING THE WORLD

For CHC2016, we had a lot of input and feedback from attendees which will be incorporated as we construct the next conference. The technical program rated very highly and we had these comments about it:

- Fantastic conference!
- Job well done!
- Outstanding Job by all organizers
- One of the best Hydro conferences in years



There were also a number of great comments from sponsors and exhibitors with 100% saying they are definitely or very likely to return to a future conference:

- Plenty of technical knowledge is passed around at this conference as well many technical connections made.
- The conference provided a great setting for networking with key existing and potential customers. Look forward to attending the next CHC-NSC event!

We hope to see you in Victoria in March 2018.

For more information please visit

<https://www.eiseverywhere.com/ehome/index.php?eventid=222640&>

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.

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 held a series of workshops involving both Canada Lands Surveyors and private industry, appeared before the Standing Committee on Fisheries and Oceans twice and made presentations at different venues such as the Canadian Hydrographic Conference, the National Surveyors Conference and two conferences in France.

The ACLS is encouraged to see that an initiative is moving forward that will have a marine cadastre component. The initiative consists of a joint NRCan-DFO pilot project to build a Marine Spatial Data Infrastructure (MSDI) in three different spots (Bay of Fund (East), Dixon Entrance (West), and Beaufort Sea (North)). The ACLS Offshore Committee will be monitoring the advancement of the project.

FOREIGN CREDENTIAL RECOGNITION INITIATIVE

In December of 2014, the Chair of the Canadian Board of Examiners for Professional Surveyors (CBEPS) asked for support from all the surveying associations and some universities to apply for funding through the Foreign Credential Recognition Program with Employment and Social Development Canada (ESDC) to develop tools to improve the assessment process for Internationally Trained Professionals (ITP) at a national level.

Since the ACLS provides the administrative support for CBEPS activities and has experience with an ESDC funded project, the ACLS Council decided to support the CBEPS initiative in preparing a proposal to the Foreign Credential Recognition (FCR) program operated by the Government of Canada.

The FCR program is designed for the: "development, validation and implementation of foreign credential recognition tools and processes to enable regulatory authorities and stakeholders in non-regulated occupations to assess and recognize the international credentials, work experience, competencies and knowledge of internationally trained individuals in a consistent, fair, transparent and timely fashion"

The proposed project, "Improving the tools and processes to assess and recognize foreign credentials for entry in to the surveying profession in Canada", is expected to build on work that has been undertaken in this field since April of 2008 by the Association of Ontario Land Surveyors with provincial funding in partnership with York University. The proposed project seeks to form a consortium of sister associations and academic institutions across Canada who are willing to effect change designed to benefit and improve the ITP experience.

While the proposed project is targeted at ITP candidates, the deliverables can and would provide enormous benefits to domestic candidates as well. Alternative assessment methodologies, more flexible learning delivery methods and systems for the transferability of recognition across Canada are elements that most will recognize as valuable and worth undertaking.

We have gathered support from all associations as well as two universities and will provide a concept paper to ESDC in June of 2016.

SCHOLARSHIP WINNERS

Every year ACLS Foundation awards scholarships of \$1,500 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:

- **David Bowater**, University of New Brunswick
- **Ivan Klemetsrud**, British Columbia Institute of Technology
- **Mary McLennan**, University of New Brunswick

Visit our website at <http://www.acls-aatc.ca/en/node/66> for additional information about the Geomatics Scholarship Program and eligibility requirements.

CANADA'S INDIGENOUS PEOPLES

Our members are highly trained and interact regularly with Canada's Indigenous peoples in the provision of land survey services, professional support, and advice. These services form the essential foundation required for improving and advancing infrastructure, planning, and development on their lands.

The ACLS is committed to collaborating with Indigenous Peoples, Natural Resources Canada, Indigenous and Northern Affairs Canada, and all participants in the land management process towards effective systems that support issues most important to Indigenous Peoples, particularly in the areas of community and economic development. This relationship has been strengthened by two workshops that were at the previous two National Surveyors' Conferences called "The CLS at the Service of Aboriginal Communities!" and "Surveys - Providing a Foundation for Development on Indigenous Lands". Both workshops involved presentations and discussions, and were widely attended with Indigenous participation in both speakers and attendees.

The ACLS has active committees composed of ACLS members, staff from the Surveyor General Branch of Natural Resources Canada and Indigenous and Northern Affairs Canada, as well as key individuals from the National Aboriginal Land Managers Association, the First Nations Land Management Resource Centre, and the Canadian Institute of Planners. The Aboriginal Liaison Committee strives to develop and maintain linkages between Canada Lands Surveyors and Indigenous communities, organizations and Government to support the role of the Canada Lands Surveyor in providing land surveying services for successful Indigenous community and economic development. Given the diversity of Indigenous governments and the broad geographic extent, meeting the objective of this committee continues to be a challenge.

In order to meet that challenge, a year ago the Aboriginal Liaison Committee established three Working Groups to focus on specific tasks:

- The Aboriginal Continuing Professional Development Working Group concentrates on developing information packages and learning opportunities to support ACLS members

in establishing relationships with Indigenous communities and promote the value of the CLS profession in those communities.

- The Engagement with Aboriginal Communities Working Group works to develop tools and search for opportunities to promote the CLS profession and the value of the survey system for social and economic development in Indigenous communities.
- The Integrated Land Management Working Group collects and documents best practices on land management of Indigenous lands that includes integrating knowledge and expertise in land registration, surveying, planning, GIS, and engineering to create a system land managers can use to find what would apply to their situation.

RELATIONSHIP WITH NRCAN'S SGB

ACLS's relationship with the Surveyor General Branch (SGB) continues to be a close and valued partnership. The ACLS and SGB continue to set the groundwork for the evolution of the Canada Lands Survey System into the foundation for a truly integrated property rights infrastructure for Canada Lands. Thirteen Surveyor General Branch employees are active in various ACLS committees.

CONCLUSION

The ACLS continues to be a leading organisation in the Canadian geomatics community and is grateful to its many volunteers who are really the backbone of this association.

The ACLS prime responsibility is to protect the public's interest. In fact the objects of the Association are the following as defined in 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 the duties and exercise the powers that are imposed or conferred on the Association by the Canada Lands Surveyors Act.

Canada Lands Surveyors (CLS) in government and the private sector are responsible for building and maintaining a reliable survey system on Canada Lands and private lands in the territories which is a critical element of a strong property rights system. Without a strong property rights system, there cannot be economic growth. Survey and registration systems provide the necessary framework for the identification, documentation, registration, and protection of land interests. This in turn provides security of land tenure and enables efficient markets for land transfers by specifying the rights and obligations of owners and investors in the land.

On First Nations reserves especially, surveys are necessary for resource management and planning as well as social and cultural preservation. This enables accurate definitions of the land to be used to build a strong property rights infrastructure which creates the basis for sustainable development.

Our members are proud of this responsibility and have met the challenge since 1874.



ACLS·AATC