



## 2018 ANNUAL REPORT



**ASSOCIATION OF CANADA LANDS SURVEYORS**

ANNUAL REPORT FOR THE YEAR ENDING ON DECEMBER 31ST, 2018

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# Executive Summary

The **Association of Canada Lands Surveyors (ACLS)** is well on its way to realize its vision as a national leader of the surveying profession and is playing a major role internationally.

Canada's oceans offer an enormous economic potential for the future of Canada, but as more stakeholders put to use different parts of the ocean environment, these stakeholders will increasingly come into conflict. A **multipurpose marine cadastre for Canada's oceans** is an important tool for the effective governance of the marine region, to allow for the orderly and sustainable development of ocean resources.

The ACLS has been following the advancement of the Fisheries and Oceans Canada project to build a **Marine Geospatial Data Infrastructure (MSDI)** which includes a marine cadastre component. The project seems promising but the ACLS has concerns and has submitted its recommendations to the Director General of the Canadian Hydrographic Service.

The Association developed a **Hydrographic certification program** that received international recognition in 2016. The program is only the second national program in the world to receive this recognition. In 2018, the **ACLS signed a Labour Mobility Mutual Recognition Agreement with The Australian Surveying & Spatial Sciences Institute and The New Zealand Institute of Surveyors** who co-manage the other internationally recognized certification program. At this time, the ACLS program is being used as a model by other countries who are working on developing their own programs.

In 2017, the ACLS began the **Pathways to Credential Recognition of Foreign Trained Land Surveyors project** and is currently at its implementation phase with the objective to launch a new streamlined process for assessing and guiding Foreign Trained Land Surveyors (FTLS) to becoming **Professional Land Surveyors** in Canada on April 1, 2019.

The new process to assess the qualifications of FTLS's was developed in collaboration with all 10 Canadian Professional Land Surveying regulatory bodies and the six universities that offer Geomatics programs. The varied experience of foreign trained professionals will be of immense benefit for our profession.

The ACLS is committed to collaborating with all participants in the land management process towards effective systems that support issues most important to First Nations Peoples, particularly in the areas of community and economic development. To contribute to the capacity building of land managers in First Nations communities, the ACLS developed a tool kit that is available on its web site. This kit provides information on the main components of a survey project.



# ACLS:

The Association of Canada Lands Surveyors (ACLS) is the national licensing body for professionals that survey in the three Canadian Territories, in the National Parks, on Indigenous Reserve lands, including above and below the surface of Canada's oceans. The exclusive title attributed to these professionals is that of a 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 measurement for the creation of new boundaries or the retracement of existing boundaries between contiguous (or adjacent) parcels of land.

Surveyors apply mathematics, property law and 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.

**As per Section 6 of the Canada Lands Surveyors Act, the objects of the Association are:**

- (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 this Act.



# Council Members 2018–2019



**Dominique Fecteau**  
President  
*Mont-Tremblant, QC*



**Tania Bigstone**  
Past President  
*Dartmouth, NS*



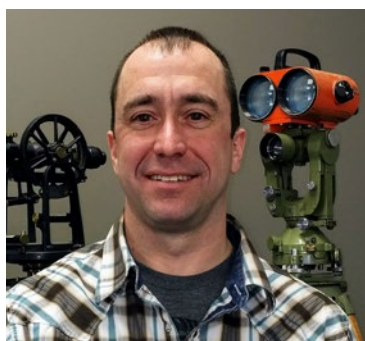
**Robert Pinkerton**  
Vice President  
*Calgary, AB*



**Doug Dodge**  
3rd Year Councillor  
*Williams Lake, BC*



**Jim Christie**  
2nd Year Councillor  
*Vancouver, BC*



**Philippe J. Breau**  
1st Year Councillor  
*Néguaac, NB*



**Geoffrey Connolly**  
Appointed by the Minister  
*Cornwall, PEI*



**Leona Irons**  
Appointed by the Minister  
*Curve Lake, ON*



**Jean Gagnon**  
Surveyor General  
*Ottawa, ON*



**Jean-Claude Tétreault**  
Executive Director  
*Ottawa, ON*

# David Thompson Awards

For over 12 years, the David Thompson National Geomatics Award has been awarded to surveyors in an effort to nationally acknowledge their achievements and excellence in the field of geomatics in Canada. 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 Victoria on March 2, 2018.*

## Challenging Cadastral Survey Project

In the category Challenging Cadastral Survey Project, the winner was Paul Burbidge (pictured below receiving the award from past ACLS president, Tania Bigstone) of Inukshuk Geomatics Inc. for the project entitled: "Inuvik to Tuktoyaktuk Highway, Northwest Territories-Inukshuk Geomatics Inc.". Inukshuk Geomatics provided survey and geomatics support including the original ground survey for the highway's design; identifying routes to gravel pits and measuring the amount of gravel taken; guiding all aspects of the construction; undertaking the largest legal land survey done on Canada Lands in 2017; and the final as-built survey.

The job took over four years to complete. Even up to a couple of weeks before the official opening of the highway on November 15, 2017, surveyors were measuring the final as-built location.



## Challenging Non-cadastral Survey Project

In the category Challenging Non-cadastral Survey Project, the winner was Chris El-Araj (Thael Hill pictured below accepting the award on El-Araj's behalf) of Underhill & Underhill for the project entitled: "The George Massey Tunnel Automated Monitoring Project."

In early 2016, five large bridge piles (measuring 2 metres in diameter and over 60 metres in length) were to be installed directly adjacent to the south portal of the George Massey Tunnel (GMT) as part of a Geotechnical Test Pile Engineering study. The GMT is located in greater Vancouver, British Columbia, on Highway 99 passing under the South Arm of the Fraser River, between Delta and Richmond. Due to the public safety concerns on one of the busiest roadways in Western Canada the approach and tunnel structure was to be monitored in real time using a fully automated total station system with a maximum time span of 2 minutes between each set of measurements on each of the +/-40 prisms, 24 hours per day, 7 days per week, for the project duration. Five precise total stations were required to meet the 2 minute threshold. Additionally, a precise control network was required, to meet the project accuracy requirement of +/-3 mm at a 95% confidence level.





# NSC 2019: Halifax: Historic Gateway to Canada

Each year, to comply with the statutory requirements for the ACLS annual general meeting and the continuing professional development (CPD) of its members, the Association provides CPD seminars in conjunction with the National Meeting. While the intent is to provide informative sessions to the ACLS members, the ACLS does open these sessions to surveyors from provincial surveying jurisdictions as well as students currently enrolled in the field of surveying. It is a great opportunity to network, learn and discuss survey related issues and accomplishments from each other's region of practice.

This year the Association of Canada Lands Surveyors and Professional Surveyors Canada are uniting to hold the 2019 National Surveyors' Conference, which will be held in Halifax, Nova Scotia from May 1 to 3, 2019. The theme of this year's conference is: Halifax: Historic Gateway to Canada.

A special workshop entitled "Responding to Change – The Evolving Boundaries of Practice" will be of particular interest to those involved in land management around the world. Cadastral systems and the associ-

ation management of lands are undergoing significant change in Canada and around the world. The workshop will present a snapshot of the current and potential impact of changes in technology, society and governance on cadastral systems across Canada and will compare the Canadian situation to recent strategic initiatives internationally.

A key goal of the workshop is to open a national and pan-community dialogue leading to the articulation of a strategic vision for the management and delivery of the next generation cadastral system to Canadians. We hope that this dialogue will continue at an international level during the 2020 edition of the National Surveyors Conference where it is expected that the Working Party on Land Administration under the aegis of the United Nations Economic Council for Europe will join us in 2020.

For more information on this year's National Surveyors Conference, please visit:  
[www.acls-aatc.ca/national-surveyors-conference-2019](http://www.acls-aatc.ca/national-surveyors-conference-2019)







## CHC-NSC 2018: Land and Sea Shaping the World

The Association of Canada Lands Surveyors and the Canadian Hydrographic Association united to hold a conference in Victoria, BC from March 26th to 29th, 2018 at the Empress Hotel. The theme of the conference was: Land and Sea Shaping the World. 450 delegates from across Canada and from around the world attended the conference.



# 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**

All through the year 2018, the ACLS By-laws and Legislations Committee and members of the NRCan Surveyor General Branch staff worked on preparing a working document explaining the modifications that the Committee feels are necessary to address the topics listed above. Work will continue in 2019.

## 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, 3 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.*

Additionally in 2018, the ACLS signed a Labour Mobility Mutual Recognition Agreement with The Australian Surveying & Spatial Sciences Institute, and The New Zealand Institute of Surveyors who co-manage the other internationally recognized certification program.





# Canada's Offshore Zone

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.

The ACLS has been following up on the advancement the Fisheries and Oceans Canada project to build a Marine Geospatial Data Infrastructure (MSDI). The project seems promising but the ACLS has concerns and formed a special working group called the Offshore Infrastructure Task Force, which completed its report in the summer of 2018. The following are highlights from the task force report.

To populate the federal government's Marine Spatial Data Infrastructure (MSDI), as well as inform practitioners and users of Canada's offshore about the complex nature of the space, information has to be shared. Failure to act on the observations and recommendations contained in the task force report will lead to the ultimate failure of the MSDI initiative, which is supported by the ACLS.

## Recommendations from the Task Force:

- 1. Sharing:** The CHS should allow third party access to offshore infrastructure information on file.
- 2. Easement:** The Atlantic provinces and federal government should come to a legal accommodation to grant real property easements for any offshore infrastructure.
- 3. Offshore Operators:** Offshore operators should share and provide sufficient and standardized survey and engineering information to allow the MSDI to be populated correctly.
- 4. Improvements to Navigable Waters Protection Act:** Transport Canada should update the Navigable Waters Protection Act licensing conditions to ensure engineering information is provided to stakeholders.



# Frontier and Offshore Regulatory Renewal Initiative (FORRI)



The Frontier and Offshore Regulatory Renewal Initiative (FORRI) is a federal-provincial partnership working to modernize the regulatory framework for frontier and offshore oil and gas activities in Canada. FORRI's current focus is on the development of a modern suite of operational requirements for offshore oil and gas activities, termed the "Framework Regulations". The ACLS Offshore Committee responded to an invitation from FORRI to comment on revised policy intentions affecting offshore regulations.

A letter outlining ACLS concerns around the need to improve current standards and practices governing offshore infrastructure surveys, in particular to have the location of all structures on the seafloor surveyed and documented, was prepared and submitted along with comments on proposed regulations. The ACLS letter was well received by FORRI staff.

## 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 a click of the mouse. At this time there are over 150 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](http://www.geoed.ca)



# Scholarship Winners

Every year ACLS Foundation awards scholarships of \$1,750 to students enrolled in a post-secondary 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:

### Katharine Rockliff

University of Calgary



### Dylan Foote

University of New Brunswick



### Viktor Stamenov

British Columbia Institute of Technology



### Noah Thomas

University of New Brunswick





# 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 Foreign Trained Land Surveyors (FTLS's) but no Canadian central point of contact for FTLS's 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 implementation phase with the objective to launch a new streamlined process for assessing and guiding the Foreign Trained Land Surveyors (FTLS) to becoming surveyors in Canada on April 1, 2019.

The new process to assess the qualifications of FTLS was developed in collaboration with all 10 surveying regulatory bodies and the six universities who have a geomatics degree program, and will be managed by the Canadian Board of Examiners for Professional Surveyors.

FTLS's wishing to enter the surveying profession in Canada will have access to a single point of contact, which is not available at this time, and will be able to start the process from their home country. It 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 time.

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

Canada 

# Complaints and Discipline

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

We are happy to announce that no complaint was filed against an ACLS member or permit holder in 2018.

# 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.





# Survey Cost Study

As mentioned in the 2017 Annual Report, the ACLS in partnership with the Surveyor General Branch (SGB) of Natural Resources Canada and Indigenous Services Canada (ISC), conducted a “Survey Cost Study” to consider the assertion made that “the cost of surveys on Canada Lands is 2 to 3 times more expensive than on non-Canada Lands”. A comparative study of survey projects was made, between surveys conducted on First Nation lands, and those done under the Provincial system.

## **There were 3 parts to the Data Collection:**

1. Interviews with First Nations
2. Surveys Research and Land Surveyor Interviews
3. Comparison of Surveys

The Cost Study Report was finalized on July 12, 2018, and is available at: [www.acls-aatc.ca/wp-content/uploads/2018/09/Cost-Study-FINAL.pdf](http://www.acls-aatc.ca/wp-content/uploads/2018/09/Cost-Study-FINAL.pdf)

The report included data collected from 76 First Nation responses, 73 sample survey projects and a few dozen follow-up interviews, thereby resulting in an immense and highly technical report. Upon review of the final report, the ACLS felt that it could be a challenging and time-consuming effort for those trying to extract useful information from, when wanting to obtain a survey on First Nation Reserve lands. The ACLS decided to create a small sub-committee consisting of 5 of their members to prepare a set of 4 documents that Land Managers may find more valuable and pertinent when looking to have a survey conducted on their Reserve lands.

## **The 4 documents prepared were on the main components of a survey project:**

1. Project Initiation and Preliminary Planning and Research
2. Fieldwork
3. Plan Preparation and Office Work
4. Approvals and Registration of Survey Plans

The draft version of these documents were presented to the over 225 participants at the National Aboriginal Lands Managers Association, Annual Gathering in Whitehorse on September 13, 2018. Comments on the documents were requested and welcomed from the participants, as well as the ACLS Membership.

The documents were finalized in December 2018 and are available at: [www.acls-aatc.ca/aboriginal-expertise/survey-cost-tool-kit/](http://www.acls-aatc.ca/aboriginal-expertise/survey-cost-tool-kit/)

These documents are the start of a tool-kit for ACLS Members, Land Managers and other stakeholders to download, reference and discuss in order to gain a better understanding of surveys on First Nation's Lands. Additional documents are being planned and prepared, and a few will be ready for presentation at the ACLS National Surveyors Conference in Halifax on May 1–3, 2019.

## **The subject of these documents are:**

- The Role of a Land Surveyor: the education, duties and non-duties of a land surveyor
- The Survey Plan Process: an interactive chart of a survey plan from start to finish, including examples of the relevant documents.



# ACLS Exam Enhancement Project (EEP)

In January of 2018, the ACLS started a project dedicated to improving the quality of efficiency of its current examination system. There are three objectives in achieving a more efficient examination system through the ACLS Examination Enhancement Project (EEP). These objectives are as follows:

- To provide a mechanism to allow candidates to prepare and succeed in writing the necessary examinations
- To update study material and fill in the gaps in the French material
- To eliminate the biannual face-to-face sitting of the examinations for candidates who do not hold a provincial surveying commission and provide greater flexibility to this entire candidate stream.

This project is expected to be completed in the spring of 2019.

The ACLS implemented an on-line examination system back in 2012. To improve the system, the following tasks were completed:

- Create 4 exam modules in both languages and eliminate the single on-line exam.
- Modify the system to allow candidates to have access to the same exam in both languages to help the francophone candidates understand the questions as most of the terminology in the study material is in English.
- Update the database of questions.

The improved ACLS on-line examination system was implemented in the spring of 2018. We are now working on completing the study material necessary for candidates to be successful in writing the exam.





# New Book on the CLS Profession

In November 2018, the Association of Canada Lands Surveyors Council decided to proceed with the production of its first book on the CLS profession to be written by acclaimed author, Charlie Wilkins.

Charlie Wilkins's foregoing reputable publications include the Association of Ontario Land Surveyors' book, *Great Lengths: A Celebration of the Surveyors of Ontario*.



The prime focus of this ACLS publication will concern the areas of Canada lands which are relevant to the Association, such as Canada's oceans, Northern Territories, National Parks and Indigenous Lands.

In addition, this publication will delve into the crucial role that women play within the realm of Canadian land surveying.

The historical component of the ACLS and its predecessors of the Dominion Land Surveyors will be explored, dating back as far as the great Dominion Land Survey of the mid-late 1800s up until present day Indigenous land claims and National Park systems throughout the nation.

The overall objective of this publication is to provide a captivating and varied experience for its readers. Through the delivery of a variety of independent inviting elements that are relevant to the interests of the Association, each reader can expect to immerse themselves into a book that will satisfy their curiosity and enlighten them from start to finish.

This new publication will be available in the summer of 2020.



**ACLS · AATC**

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