



CANADIAN ASSOCIATION FOR LABORATORY ACCREDITATION INC.

2018 Annual Report



CALA



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Chair's Report



"You can't stop the waves, but you can learn to surf." Why should we take on new challenges? As this quote from Jon Kabat-Zinn implies, we can get battered by the forces around

us or else we can become the masters of those forces and use them to our benefit.

The past year has been a challenging and exciting year with significant changes on the horizon for CALA. The dedication and hard-work of CALA staff along with my fellow board members laid the groundwork that will prepare us for successful transitions in many of the ways CALA operates. Due to changes in ISO/IEC 17011, CALA is faced with the task of separating the accreditation and proficiency testing programs. As you can appreciate splitting these programs is a significant change to the overall structure at CALA. Thanks to the foresight of previous CALA boards that saw the need for the sustainability of individual CALA programs, splitting these programs will be a much easier transition.

Extensive work and planning for the structural changes that will separate accreditation and proficiency testing has been done over the past year. CALA will continue to offer accreditation and training while a new organization will provide proficiency testing services. Information on these changes will be presented at the 2019 annual general meeting. The changes also present an opportunity to look at other association bylaws as well

as the size and structure of the CALA board. With a smaller organization, fewer program offerings and the board's focus on governance, the goals of the association can be achieved with the oversight of a smaller board.

As noted, the focus on sustainability of individual CALA programs has been enormously beneficial to these structural changes. While sustainability of the accreditation and proficiency testing programs was readily achieved, sustainability of the CALA training program proved more difficult. However, in the past year we have seen remarkable success in that direction. Notably, increased demand for training as a result of the new ISO/IEC 17025:2017 standard, developing some training courses in French, as well as other changes to the business model have helped the program achieve that goal of sustainability. This is indicative of how CALA consistently rises to the challenges it is presented.

Another significant change on the horizon is the implementation of the new Association Management System (AMS) that has been under development for several years now. This is a project that has incurred significant association resources and as such, poses significant risks to our association. With significant risks, often come significant benefits. Despite the many setbacks, this project is now nearing completion. CALA is anticipating that we will be able to realize the benefits of this system in the near future. As with many aspects of our association, we rely heavily on our volunteers. For this system too,

it's important to note the contributions of volunteers and CALA staff on the working groups that continue to help with the required testing.

For many years now, CALA has been looking at ways to expand the organization. Recent efforts to expand marketing and communication activities along with work to enhance the CALA brand will help to achieve this goal. In addition, there are also opportunities within the newer Cannabis industry in Canada. It is my belief that accreditation of labs will be extremely important to help ensure public confidence in the health and safety of cannabis products. With the potential for new growth and all the other significant changes taking place, it is now time to revisit our long-term strategic plans.

This was the first full year with Andrew Adams as president and CEO of CALA. It has been a pleasure working with Andrew and he has faced numerous challenges beyond the structural and operational

changes noted above. Although some changes in key staff were particularly trying, there are so many great people working for the CALA organization that staff turnover is normally something of a rarity. Beyond having a great staff at the CALA office, we have a large base of dedicated volunteers in our association. CALA volunteers are a fantastic group of people that strongly believe in the importance of accreditation to improving quality amongst laboratories. I want to wholeheartedly thank all of you for your efforts. It has truly been my pleasure to serve as chair of the CALA board. With the support of so many dedicated people, it gives me great confidence to know that CALA is an extremely valued organization and strongly supported. Clearly, we're not being battered by the waves; we are indeed learning to surf.

Sincerely,
Jeff Zimmer
Chair

President & CEO's Message



2018 was, without a doubt, a year with a difference at CALA. If I had to sum it up, I would say, it was a year of looking to the future but acting in the present. There was a definite

focus on change. Some of the changes have been previously mentioned in the CALA newsletter, such as the need to separate proficiency testing from CALA's accreditation activities, others, like our work on rebranding CALA, are probably new to most of the membership. This will be the penultimate annual report for CALA in its current form so I would like to take this opportunity to share with you what is coming and why.

Perhaps the most significant change that is coming is the separation of CALA's Proficiency Testing (PT) program from its accreditation and training activities. Everyone working in laboratories accredited to ISO/IEC 17025 – *General requirements for the Competence of Testing and Calibration laboratories*, knows that an updated version of ISO/IEC 17025 was released in November 2017. At the same time an updated version of ISO/IEC 17011 *Conformity Assessment – Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies*, was also released. ISO/IEC 17011 sets out the requirements for the operation of Accreditation Bodies (ABs) like CALA. A significant change in the 2017 version

of ISO/IEC 17011 is the requirement that ABs not be associated with companies/organizations that operate PT programs (sec. 4.4.11 of the standard if you want to look it up) or if the AB is linked to a body offering PT, the AB must have different top management, different personnel performing the accreditation decision-making processes, distinctly different name, logos and symbols and effective mechanisms to prevent any influence on the outcome of any accreditation activity (sec. 4.4.12 of the standard).

Knowing that these changes were coming CALA had started work on options to respond to the requirements. In 2018 the options analysis was finalized and presented to the Board at its November meeting. The Board's decision was that a new not-for-profit corporation be created that will be independent from CALA and will take over CALA's current PT activities. CALA staff and Board of Directors are working on creating the new company with the goal of having it fully operational for the start of 2020. The new company will have its own senior management as required by the standard and its own Board of Directors. It will operate completely independently of CALA but will purchase accommodation, financial, HR, IT and other services from CALA. This will help ensure that the overhead costs for the company are kept reasonable and therefore customers should not expect to see significant increases in the cost of PT samples provided by the company. There is still much work to be done to establish

the new company but everything is on track to have it established on time.

Once the new PT company is operational CALA will continue to offer Accreditation and Training services. CALA expects to be assessed against ISO/IEC 17011:2017 in May 2020, which ensures we have enough time to respond to any findings before the November 2020 deadline to be compliant with the standard.

Knowing that these organizational changes were coming to CALA, we thought that 2018 was an opportune time to refresh CALA's branding. For long-term CALA staff, it came as a surprise that it had been over 10 years since CALA adopted its current logo and tag-line, Building Laboratory Excellence. The refresh of CALA's branding was an interesting journey that started in April 2018 with a day-long workshop involving CALA's Board of Directors and senior staff.

There we reached consensus on the ideas surrounding CALA's established presence and strengths in the accreditation of environmental testing laboratories. There was unanimous agreement that this, supported by excellent customer service, were among our core strengths. We also honed in on ideas that supported larger concepts of what it means for a laboratory to achieve accreditation for the laboratory itself, for customers and users of laboratory data and even for the general public as a whole. Accreditation means providing reliable and trustworthy data that is used for critical business decisions.

From this point, CALA staff worked with brand consultants to develop a refreshed brand identity. This new brand identity was to embrace the strengths of CALA

and simultaneously encompass a broader vision of our contribution to the testing laboratory business. At the same time, we remained cognizant that this must support our business's requirement for strategic growth. The results of this work were shared with the Board in November 2018, and with the Board's input and support, CALA was able to finalise a new focus and complementary visual "look" for the future.

There are many components to CALA's new brand identity. Aside from a new logo, colour scheme, tag-line and document templates, a key element in CALA's refreshed image will be a new web site. Work began on this in 2018, with plans to launch in 2019. The website will reflect our new look and will be a tool for all our users to easily find the information they want. It will still be the place where you will find reference documents, a list of accredited laboratories, supporting information on the value of accreditation and information on CALA training. Ease of navigation and quick access to useful content is the goal. Communications to stakeholders about the launch of the new brand will become visible shortly after this annual report is published. CALA will promote its branding by providing additional content on our website and other social platforms, participating in trade shows and conferences, developing new tools such as service brochures, taking advantage of editorial and speaking opportunities and communicating with our various audiences about the value of accreditation.

Linked with the refreshed website and rebranding, CALA is placing an increased emphasis on growing the business. CALA is pursuing growth opportunities across its business lines of Accreditation, Training

and Proficiency Testing. Growth is supported by increased CALA participation as a trade show exhibitor and by providing speakers at conferences. In 2018 CALA was present at the AOAC International conference in Toronto, the National Water & Wastewater Conference in Montreal and cannabis conferences in Niagara Falls and Vancouver. The legalisation of cannabis has resulted in opportunities to accredit cannabis laboratories (CALA accredited its first in 2018) provide training on the ISO/IEC 17025 standard and offer proficiency testing (coming in 2019). Another first in 2018 was CALA delivering training in French. CALA now offers three courses in French, *Understanding ISO/IEC 17025:2017*, *Internal Auditor for ISO/IEC 17025* and *ISO/IEC 17025:2017 What's new or different?* Interest in the courses in French has been strong and we will consider offering additional courses in French if there is sufficient interest. Please visit the CALA website and go to training if you are interested in these courses or any CALA training.

Besides CALA's new website, also launching in 2019 is CALA's Association Management System (AMS). If you've been following the development of the AMS you will know that this multi-year project has been somewhat delayed from the initial go-live targets but the end is now in sight. The companies developing different parts of the AMS will be concluding their independent development work this summer and will then turn their attention to the integration of what they have developed to ensure that everything works together.

I think you will agree, significant changes are on the horizon. If you have questions or comments about these changes or what they mean for your Association, please don't hesitate to contact me. I'd be happy to discuss what's coming for CALA and its members with you.

Thank you.

Andrew M. Adams
President & CEO

Board of Directors

Chair

Mr. Jeff Zimmer
Prairies and Northern, Not-For-Profit
Saskatoon, SK

Vice-Chair

Mr. R. Shane Harnish
At-Large, For-Profit
Edmonton, AB

Treasurer

Mr. Dalibor Ambrus
At-Large, Not-For-Profit
Calgary, AB

Secretary

Ms. Pam Reyno
Appointed, For-Profit
Dartmouth, NS

Dr. Joyce Austin

Pacific & Yukon Region, Not-For-Profit
Victoria, BC

Mr. Boniface Koudjonou

Ontario/Quebec, Not-For-Profit
Ottawa, ON

Mr. Barry Loescher

At Large, For-Profit
Gabriola Island, BC

Mr. Klas Ohman

At Large, For-Profit
Calgary, AB

Ms. Glenna Pike

Ontario/Québec, For-Profit
Waterloo, ON

Mr. Dave Schellenberg

Appointed, Atlantic, Not-For-Profit
Fredericton, NB

Corporate Profile

Mission *The Canadian Association for Laboratory Accreditation Inc. (CALA) is a not-for-profit member-based association that instills public confidence in laboratory test results by providing internationally recognized accreditation, proficiency testing and training services.*

History

CALA was originally established as the Canadian Association for Environmental Analytical Laboratories (CAEAL) in 1989 to help Canadian environmental laboratories conform to internationally accepted standards of competence and proficiency. It did this by developing an accreditation program based on the assessment of a laboratory's quality management system, supported by the evaluation of analytical capability determined through proficiency testing.

Between 1994 and 2004, CALA operated in partnership with the Standards Council of Canada (SCC), an arrangement in which CALA undertook all site assessments of environmental laboratories, conducted the Proficiency Testing program, and made recommendations to the Standards Council on the accreditation of the laboratories.

In 2005, CALA resumed granting accreditation independently from the SCC for over 150 laboratories, while also maintaining a partnership arrangement as described above with the Standards Council of Canada and the Ontario Ministry of Environment, specifically for the accreditation of laboratories conducting

tests under the Ontario *Safe Drinking Water Act* (OSDWA).

In November of 2005, the CALA Accreditation Program was officially recognized by the Asia Pacific Laboratory Accreditation Cooperation (APLAC) and the International Laboratory Accreditation Cooperation (ILAC).

The CALA Board of Directors has defined the ultimate goal of the organization as:

- ***CALA accredited laboratories are recognized as meeting world-class levels of scientific and management excellence.***

A series of subordinate policies focus on benefits for both the laboratories and the users of laboratory data, and ensures that Members' views are made known to regulatory and standards-related decision makers in Canada and internationally.

In 2007, CALA Members approved a broader scope of activities for CALA programs, expanding the organization's focus beyond simply environmental laboratories. The CALA corporate strategic plan included provisions for the expansion of accreditation activities. Currently, CALA-Accredited laboratories now include the following additional types of testing: cannabis, coal, food, mineral, natural health products and petroleum.

At the June 2008 AGM, Members selected the new association name the Canadian Association for Laboratory Accreditation or "CALA", which facilitated a broader scope of accreditations beyond simply the environmental field. In October 2008, CALA officially launched its new identity and transitioned to a new "CALA" look. In

the same year, CALA signed an Agreement directly with the Ontario Ministry of the Environment for the accreditation of water-testing laboratories conducting tests under the OSDWA.

In 2009, CALA's international recognition from APLAC and ILAC was renewed for another four-year period. Later that year, CALA successfully hosted the 2009 joint meetings of ILAC and the International Accreditation Forum (IAF) in Vancouver.

In 2010, CALA's Board of Directors approved a new, more sustainable business model that completely removed the PT Program's subsidization of the Accreditation Program. Under this business model, the goal is for each CALA program area to become financially self-sustaining.

At the end of 2011, CALA had progressed on its goal to expand its scope of services beyond only environmental testing by having drafted the basis for an agreement with the Canadian Food Inspection Agency (CFIA). The agreement was subsequently formalized on February 1st, 2012.

In 2012, CALA, in conjunction with CFIA, undertook the development and implementation of food accreditation assessment procedures, and piloted a food microbiology PT Program.

In 2013, CALA implemented a PT scheme for food microbiology to support Canadian laboratories seeking a Canadian source of PT, and CALA's international recognition from APLAC and ILAC was renewed for another four-year period.

In 2014, the PT Program switched to the robust statistical procedure recommended in ISO 13528 – *Statistical methods for use*

in proficiency testing by inter-laboratory comparisons (Algorithm A). As well, the Standards Council of Canada selected a CALA staff member to participate on the ISO/CASCO working group tasked with reviewing and revising ISO/IEC 17025:2005 – *General requirements for the competency of testing and calibration laboratories.*

In 2015, the CALA Board of Directors approved two major long-term initiatives: the redevelopment of CALA's Association Management System and the CALA 2020 Strategic Plan, for the years 2016-2020. Due to insufficient participation, CALA discontinued the food microbiology PT scheme at the end of 2015.

In 2016, the CALA Accreditation Program underwent a scheduled re-evaluation by APLAC and met the requirements to maintain its signatory status with ILAC for another four (4) years. Also in 2016,

incumbent CALA President & CEO Charlie Brimley informed the Board of his intent to retire at the 2017 AGM. A professional executive search firm was contracted to lead the search for CALA's next President & CEO.

In 2017, Andrew Adams was hired as President & CEO. In the second quarter of 2017, the Training Program introduced a new storefront and online learning management system.

CALA was busy in 2018, largely due to the fact that ISO/IEC 17025:2017 was published in the last quarter of 2017. CALA updated policies and procedures, trained assessors on the new version of the standard, and developed and delivered training courses for laboratories. This effort was needed to ensure that all CALA-accredited laboratories are accredited to ISO/IEC 17025:2017 by November 29, 2020.

MEMBERSHIP AND CLIENTS

At the end of 2018, there were 681 clients of CALA (see Table 1), including 506 CALA Members (see Table 2). The number of clients increased 6% from 2017, primarily as a result of an increase in private sector, non-Member clients.

CALA offers programs and services in 3 major areas as follows:

- Accreditation (see page 15 for details)
- Proficiency Testing (see page 19 for details)
- Training (see page 22 for details)

CALA offers programs and services internationally, and participates in Mutual Recognition Arrangement activities (see page 24 for details).

Table 1. Components of CALA Clients

Type	Members	Non-Member Clients	Totals
Private	261	129	390
Public	209	46	255
Independent	36	0	36
Totals	506	175	681

Table 2. Components of the CALA Membership

Type	Institutional	Individual	Totals
Private	207	54	261
Public	109	100	209
Independent	0	36	36
Totals	316	190	506

Financial Report

CALA's total revenue for 2018 was \$3.88 million, approximately 0.16% (\$6,341) lower than budget, but 6.6% higher than the previous year results.

Evaluations as an income category on the Financial Statement are comprised of Proficiency Testing (PT) and Accreditation services. Year-end results for the PT program were 3.16% (\$51,209) below budget. Accreditation income for 2018 was \$65,721 (4.5%) greater than 2017 results and ended the year ahead of budget by \$20,153 (1.3%).

Finishing the year only 0.45% (\$2,223) under budget, the Training program effectively met its growth targets in 2018. Training on ISO/IEC 17025 standards, along with new offerings of training in French and sales of annual training subscriptions contributed to increased sales over the prior year. Training improved performance over the prior year results by 50.14%.

Other income includes foreign currency gains and losses, interest income, gains (or losses) on disposal of sales of investments, and unrealized gains on investments. In 2018, continued investment in the Association Management System (AMS) has further reduced the investment portfolio. Gains on foreign currency have added to this income category, which help offset losses in market value on the investment portfolio at year-end.

Total expenses for the fiscal year were approximately \$3.7 million, up 9.75% from prior year and 6.3% lower than budgeted expenses of \$3.9 million. Program-related costs were under budget by 5.7% for a total of \$93,877. This is a combination of reduced sales requiring less product and finding efficiencies within existing work. Salaries, general overhead/administrative costs were also below budget by 3.81% and 13.2% respectively. Underspending in 2018 was driven mainly by delays in projects undertaken, the most significant being the continuation of development for the AMS moving the launch into 2019. This has resulted in the delay of expenses to launch, train staff, and amortize the investment. We continue to focus on controlling and reducing administrative expenses while maintaining service levels. This is an ongoing annual strategy to ensure that CALA administrative expenses are monitored and kept within reasonable levels, further reducing the pressure on program areas.

Employees and volunteers are an integral part of our association and we are fortunate to have a very skilled and dedicated team working at CALA. While the economic value of volunteer time has not been captured in our financial statements, please note that the association continues to benefit greatly from the generous contribution made by

all of its volunteers, allowing us to operate such successful programs.

In summary, the Association maintained its strong financial position in 2018 through consistent, careful management of revenue, expenses and cash flow and, after factoring in amortization of capital assets, ended

2018 with an operating surplus of \$186,624. This increase in net assets resulted in an ending accumulated surplus of \$2.7 million. CALA is an organization that will continue to be successful through the diversity and versatility of the programs it offers and the strong management systems in place.

Report of the Independent Auditor on the Summary Financial Statements

To the Members of the Canadian Association for Laboratory Accreditation Inc.

Opinion

The summary financial statements, which comprise the summary statement of financial position as at December 31, 2018, and the summary statements of operations and of cash flows for the year then ended, and related notes, are derived from the audited financial statements of Canadian Association for Laboratory Accreditation Inc. (the Entity) for the year ended December 31, 2018.

In our opinion, the accompanying summary financial statements are a fair summary of the financial statements, in accordance with the criteria disclosed in Note 1 to the summary financial statements.

Summary Financial Statements

The summary financial statements do not contain all the disclosures required by Canadian accounting standards for not-for-profit organizations. Reading the summary financial statements and the auditor's report thereon, therefore, is not a substitute for reading the Entity's audited financial statements and the auditor's report thereon.

The summary financial statements and the audited financial statements do not reflect the effects of events that occurred subsequent to the date of our report.

Management's Responsibility for the Summary Financial Statements

Management is responsible for the preparation of the summary financial statements in accordance with the criteria disclosed in Note 1 to the summary financial statements.

Auditor's Responsibility

Our responsibility is to express an opinion on whether the summary financial statements are a fair summary of the audited financial statements based on our procedures, which were conducted in accordance with Canadian Auditing Standard (CAS) 810, *Engagements to Report on Summary Financial Statements*.

Chartered Professional Accountants
Licensed Public Accountants

Ottawa, Ontario
April 11, 2019

Summarized Statement of Financial Position

December 31, 2018

Assets	2018	2017
Current assets	\$ 1,411,385	\$ 1,478,178
Long-term investments	871,050	880,925
Tangible capital and intangible assets	1,344,055	1,068,885
	\$ 3,626,490	\$ 3,427,991
Liabilities and Net Assets		
Current liabilities	\$ 885,888	\$ 874,013
Unrestricted Net Assets	2,740,602	2,553,978
	\$ 3,626,490	\$ 3,427,991

Summarized Statement of Operations and Change in Net Assets

Year ended December 31, 2018

Revenues	2018	2017
Evaluations	\$ 3,198,261	\$ 3,119,262
Memberships	160,600	146,250
Miscellaneous	5,874	622
Training	492,947	328,319
Other revenue	21,512	44,862
	3,879,194	3,639,315
Expenditures		
Evaluations	1,388,603	1,129,699
Operational	2,129,734	2,134,304
Training	174,233	100,420
	3,692,570	3,364,423
Excess of revenue over expenses	186,624	274,892
Net assets, beginning of year	2,553,978	2,279,086
Net assets, end of year	\$ 2,740,602	\$ 2,553,978

Summarized Statement of Cash Flows

Year ended December 31, 2018

	2018	2017
Cash flows provided by (used in)		
Operating activities	\$ 229,182	\$ 193,286
Investing activities	(205,242)	(9,996)
Net increase (decrease) in cash	23,940	183,290
Cash, beginning of year	739,528	556,238
Cash, end of year	\$ 763,468	\$ 739,528

Note 1

The information selected by management for presentation in the Summarized Annual Financial Statements has been identified as being the most pertinent and useful financial data for inclusion in the CALA annual report. The summarized financial statements do not reflect the substantial value of services contributed by volunteers.

Accreditation Program

CALA is one of 100 worldwide accreditation bodies that is signatory to the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement. This arrangement provides stakeholders with assurance that the CALA Accreditation Program meets requirements of the international standard ISO/IEC 17011 – *Conformity Assessment – General Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies*.

CALA laboratory accreditation is based on ISO/IEC 17025 – *General Requirements for the Competence of Testing and Calibration Laboratories*. On November 29, 2017 a new version of ISO/IEC 17025 was published; as such, 2018 was a transition year for CALA and for laboratories. Laboratories due for a reassessment prior to September 01, 2018 had the option to be reassessed to ISO/IEC 17025:2005 or ISO/IEC 17025:2017. By September 01, 19.8% of laboratories with a reassessment in 2018 opted to be reassessed against ISO/IEC 17025:2017. After September 01, 2018 all laboratories were reassessed to ISO/IEC 17025:2017 with the overall result being that 67.9% of the laboratories reassessed in 2018 were reassessed against the new version of the standard. All CALA accredited laboratories must attain accreditation to the ISO/IEC 17025:2017 by November 29, 2020.

Trained assessors with the appropriate expertise assess laboratories against the requirements of ISO/IEC 17025. If any nonconformities are identified, the laboratory has the opportunity to respond to these findings within a specified

timeframe. CALA staff, the Lead Assessor and Advisory Panel members perform the subsequent review of these corrective actions and a recommendation is forwarded to the CALA Accreditation Council, which has the final approval on whether to grant or maintain accreditation. Over and above the assessment, an important component of the accreditation process is demonstration of successful participation in Proficiency Testing (PT) as per P02-03 *Proficiency Testing Policy for Accreditation*.

CALA has granted accreditation to 209 government and private sector laboratories (see Figure 1). Forty-seven (47) of these accredited laboratories are licensed under the Ontario *Safe Drinking Water Act* (OSDWA). In 2018, six (6) new laboratories underwent an initial assessment, and five (5) accredited laboratories withdrew from the accreditation program.

Figure 1 Sources of CALA-Accredited Laboratories

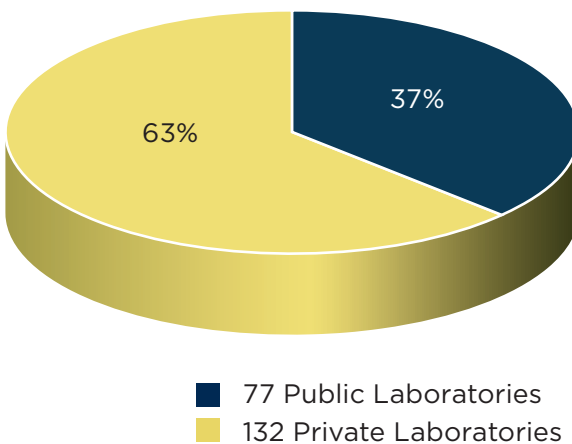
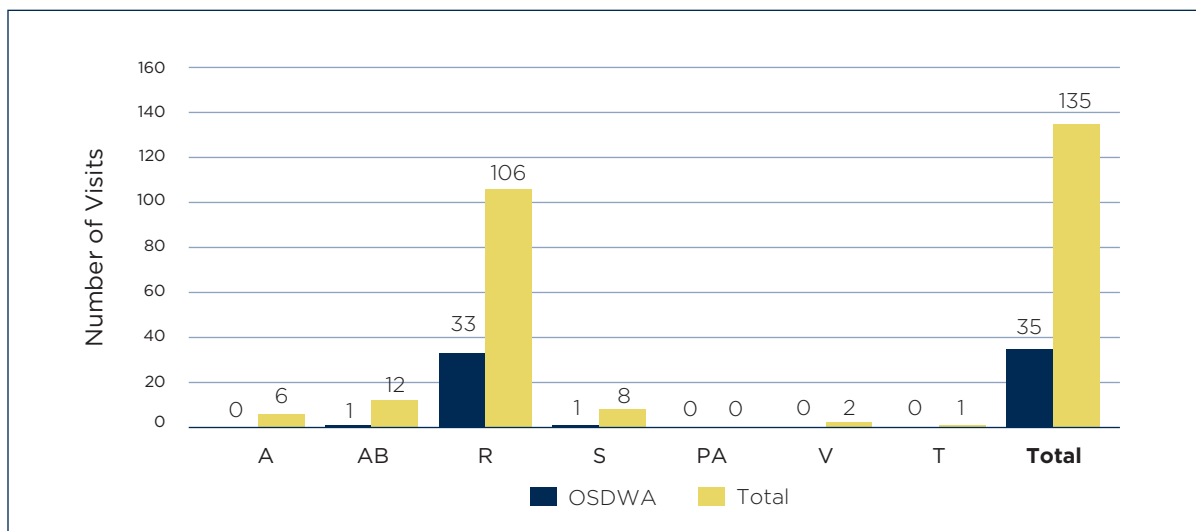


Figure 2 Categories of Site Visits Conducted in 2018

Site Visits

In 2018, CALA conducted a total of 135 site visits, of which 35 (25.9%) were conducted at laboratories licensed under the OSDWA (see Figure 2).

CALA conducts the following types of laboratory assessments:

- Initial Assessment (A): A site visit conducted at a laboratory applying for accreditation for the first time.
- Abbreviated Assessment (AB): A site visit to assess new appendices between regularly scheduled reassessments. The quality management system is not assessed during these assessments, only the technical requirements of the new test methods.
- Surveillance (S): A site visit conducted one (1) year after an initial assessment.
- Reassessment (R): A site visit conducted once every two (2) years after an initial assessment.

- Pre-Assessment (PA): A document review and a site visit, and is an opportunity for the laboratory to gain an understanding of their state of readiness for accreditation. It is not a substitute for an initial assessment.
- Verification (V): A site visit to confirm implementation of corrective actions or to ensure satisfactory conditions following significant changes at a laboratory.

Assessors

CALA assessors are predominantly volunteers from CALA-accredited laboratories, although some do come from other types of laboratories or related organizations. They are a highly-skilled, highly-committed group of volunteers that represent a valuable resource for CALA. As well as having at least five years experience in a laboratory or laboratory-related environment, these volunteers attend a rigorous CALA Lead Assessor/

Assessor course and participate in CALA-specific refresher training once every two years. There are currently 133 active volunteer assessors, primarily from public sector laboratories (see Figure 3). Seventy-four (74) of these are from 42 laboratories in the Accreditation Program, and 29 come from the 47 laboratories accredited and licensed under the OSDWA.

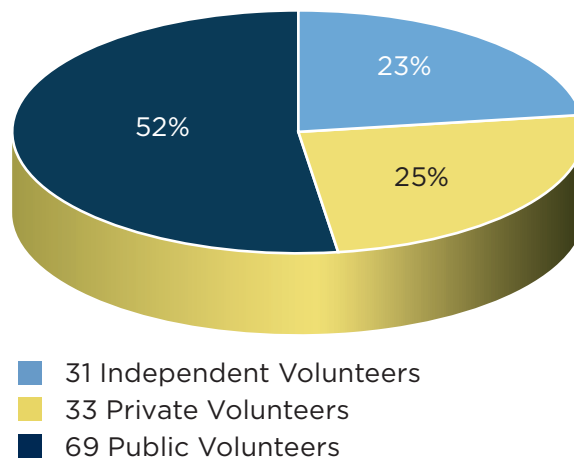
In 2018, 135 site visits were conducted, requiring 212 assessor trips. Assessor assignments ranged from a single experienced assessor at a small laboratory, to several assessors required to conduct the reassessment of a large laboratory with a complex scope of testing.

Turn-Around Time

Table 3 shows a breakdown of the major steps in the accreditation process, and the average time taken to complete each step in 2018. This data is based on site assessments performed in 2018, and is current as of March 12, 2019.

CALA targets a maximum of 45 days for staff to perform an initial review of

Figure 3 Sources of CALA Volunteer Assessors



laboratory responses, at which time further information will be requested from the laboratory or the laboratory will be informed that the corrective actions address the nonconformities. At the time this Annual Report was prepared, 64.9% of the 2018 laboratory responses were initially reviewed within the 45-day target and the average time to do so was 35.3 days. On average, the amount of time from the date of the site visit to the date of final approval was 109.8 days.

Table 3 Major Steps in the Accreditation Process

Step in the Accreditation Process	Average Time (days*)	1-7 days (%)	8-23 days (%)	24-45 days (%)	>45 days (%)**
Completion of Responses	39.0	14.8	14.8	22.4	48.0
Advisory Panel Review	2.7	90.5	9.5	-	-
Accreditation Council Approval	3.9	83.6	16.4	-	-

* subject to change, following completion and approval of visits carried out in 2018

** 88.5% of responses were completed within 90 days.

Suspensions and Withdrawals as a Result of Proficiency Testing (PT)

Accreditation may be suspended, subsequent to being granted, if a laboratory:

- fails to successfully analyze two successive sets of PT samples for a specific test (analyte);
- does not submit a satisfactory Corrective Action Report in response to a CALA PT failure.

The summary of consecutive PT failures shown in Table 4 indicates that generally, the non-accredited laboratories experienced the highest overall rate of consecutive failures while the accredited OSDWA laboratories experienced the lowest rate overall.

A third consecutive PT failure may result in withdrawal of accreditation for the analyte. In 2018, a total of 15 withdrawals occurred at accredited laboratories, with two (2) occurring at an OSDWA laboratory.

Table 4 Consecutive PT Failures at Non-Accredited, CALA Accredited and Accredited OSDWA Laboratories (values are shown as a percentage of total PT test samples)*

Study (2018)	Non-CALA Accredited	CALA Accredited	Accredited OSDWA
January	0.61%	0.12%	0.00%
March	1.68%	0.21%	0.00%
June	0.59%	0.18%	0.09%
October	0.6%	0.24%	0.33%
Overall Average	0.87%	0.18%	0.11%

* These values represent consecutive failures in the CALA PT Program only.

Column Definitions:

Non-CALA Accredited:

a PT participant that may or may not be accredited with another accreditation body.

CALA Accredited:

a PT participant accredited under the CALA Accreditation Program.

Accredited OSDWA:

a PT participant accredited under the CALA Accreditation Program and Licenced under the Ontario Safe Drinking Water Act (OSDWA).

Proficiency Testing Program

By the end of 2018 the CALA Proficiency Testing (PT) Program offered 54 test groups, comprising 383 analytes. Samples for each test group are generally provided to participant laboratories twice each year. The test groups are split between March/October rounds (inorganic and microbiology) and January/June rounds (organics and soils).

The scoring system and other details are provided in the PT15-CALA PT Program series of documents, which is available at: www.cala.ca.

PT Offerings

The following is a summary of changes to the analytes offered in the PT Program in 2018:

- The following were added in 2018:
 - Solids in Soil (C43) – 36 participants
 - Nutrients in Soil (C44) – 28 participants
 - Anions in Soil (C45) – 35 participants
- The following were added at the end of 2018, to begin 2019:
 - Acidity in Water (C46)
 - Haloacetic Acids in Water (C47)

In addition to these, steps were taken to establish a PT scheme for cannabis (potency, pesticides, metals and residual solvents), with the hope of offering the first round in 2019.

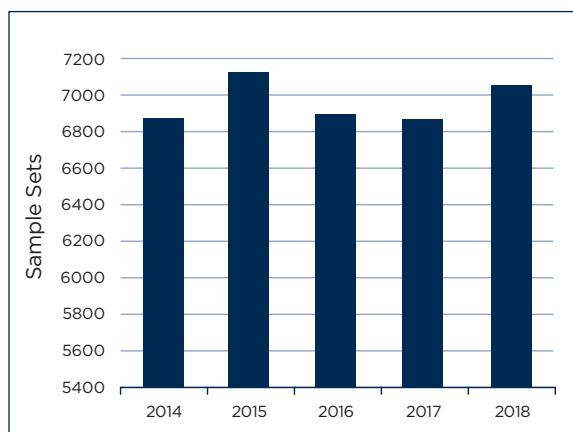
PT Fees

PT fees remained unchanged in 2018.

Participation

Participation showed a slight increase in 2018 (see Figure 4). Participation levels for each test group are indicated below in Table 5.

Figure 4 Registration Trend in the Proficiency Testing Program (sample sets = total number of shipped test groups)



Turn-Around Times

Turnaround time from reporting deadline to the issuing of the PT final report continues to be shorter than the goal of five weeks.

Summary of Proficiency Testing Performance

Appendix A details the success rates observed for each test group in each study. Also detailed are the success rates for laboratories conducting tests under the *Safe Drinking Water Act* (OSDWA). In general, average success rates were over 90%, consistent with those observed in previous years.

Table 5 Participation in Each Test Group of the CALA Proficiency Testing Program

PT	Group	Samples 2014	Samples 2015	Samples 2016	Samples 2017	Samples 2018
C-01A	Major Ions	447	454	464	460	465
C-01B	NH ₃ , o-PO ₄ , DOC	382	377	387	381	383
C-02A	Metals Full	247	240	238	232	240
C-02B	Metals High	75	78	74	69	63
C-02C	Total Metals	153	151	152	157	161
C-03	TKN & TP	260	257	263	262	267
C-04A	TSS	463	467	474	470	487
C-04B	BOD	289	280	281	276	274
C-04C	Turbidity	227	224	232	232	234
C-04D	COD	212	205	210	208	209
C-05A	Coliforms	334	331	339	326	321
C-05B	Coliforms (P/A)	81	81	80	78	79
C06A	OCP/PCBs	57	57	55	55	54
C06B	PCBs	73	76	74	77	69
C-07	PAH	136	136	129	131	127
C-08	PCB in Oil	84	81	79	81	83
C-09	Metals on Filters	30	30	30	31	29
C-11	Trout LC50	52	53	51	49	47
C-12	Daphnia LC50	47	49	47	45	43
C-13	Microtox IC50	59	62	61	56	53
C-14	CN (SAD)	95	82	86	78	77
C-15	pH	487	484	492	487	492
C-16	BTEX/THM	240	220	212	202	191
C-17	Metals in Soil	162	157	145	147	142
C-18	PAH in Soil	109	107	96	98	98
C-19	Mercury	158	158	151	150	155
C-20	Asbestos	357	359	367	380	432
C-21	Metals in Air	43	42	53	-	-
C-22	OP Pesticides	87	86	81	80	83
C-24	Aryloxy Acids	46	44	42	46	47
C-25	Phenolics	59	58	59	58	58
C-27	Glyphosate	32	31	26	29	30
C-29	Aldicarb	28	28	25	28	29

Table 5 – Continued from page 20

PT	Group	Samples 2014	Samples 2015	Samples 2016	Samples 2017	Samples 2018
C-31A	BTEX soil	132	131	127	122	120
C-31B	PHC soil	138	138	135	128	122
C-32	Chlorine	151	155	169	181	186
C-33	Total Phenolics	90	86	85	83	69
C-34	Oil and Grease	136	130	137	138	139
C35	PCB in Soil	67	72	75	73	67
C36	VOCs in Soil	85	85	88	89	85
C37	Colour in Water	114	118	125	127	129
C38	TCLP-VOCs	37	44	49	53	51
C39	TCLP-Inorganics	54	62	68	72	73
C40A	PHCs in Water	Not offered	65	89	96	92
C40B	PHCs in Water		65	87	92	86
C41	Hexavalent Chromium			51	58	60
C42	Sulphide				48	56
C43	Solids in Soil					68
C44	Nutrients in Soil					55
C45	Anions in Soil					65
C60A	Food-Meat (Qualitative)	27	65	Not offered		
C60B	Food-Meat (Quantitative)	44	65			
C61A	Food-Milk (Qualitative)	18	45			
C61B	Food-Milk (Quantitative)	25	43			
C62A	Food-Eggs (Qualitative)	8	28			
C62B	Food-Eggs (Quantitative)	9	28			
C63A	Food-Cheese (Qualitative)	21	13			
C63B	Food Cheese (Quantitative)	31	9			
C64A	Food-Feed (Qualitative)	13	37			
P50	Chlorine in Water	32	29	27	21	14
P51	Turbidity in Water	16	20	10	12	12
P52	pH in Water	15	26	12	12	12
TOTAL		6874	7104	6889	6864	7057

Training

The CALA Training Program delivers training on subjects related to laboratory accreditation. Training Program priorities remained unchanged for 2018:

- Training assessors to meet CALA Accreditation Program needs;
- Developing and delivering training within an approved training budget; and
- Assisting in the delivery of special services within the association.

2018 was the first full year using the online learning management system and the Shopify storefront. The implementation of the Shopify storefront has expanded the reach of CALA Training. Visitors from 163 countries other than Canada represented 34 percent of the total visitors to the CALA Training storefront. Eighty-three participants from outside Canada attended either a course or webinar.

With the publication of ISO/IEC 17025:2017, the demand for training was significantly higher than in previous years. Of particular note was the increased demand for onsite courses. CALA delivered 31 dedicated courses either onsite at a client's laboratory or to the client site using our virtual platform.

The revision to the standard also required a significant amount of training for CALA Assessors and Committee volunteers. A series of five webinars covering the changes to the standard were provided to CALA Assessors and Committee members. Additional content on assessing against the revised standard was covered at the 2018 Biennial in April.

Two new half day courses were added to the curriculum in 2018. *Risk Based Thinking in ISO/IEC 17025:2017* and *ISO/IEC 17025:2017 - Highlights of Changes for General Staff* were developed to assist laboratories with meeting the requirements in the revised standard.

The option for French courses was also added to the curriculum with *Comprendre l'ISO/IEC 17025 : 2017 (Understanding ISO/IEC 17025:2017)* and *Auditeur interne pour l'ISO/IEC 17025 (Internal Auditor for ISO/IEC 17025:2017)* available for onsite delivery. CALA's first course in French was delivered in May.

Virtual course delivery continues to be the most popular option for public classes. The virtual option reduces the laboratory's costs since employees can attend training without travelling.

Preparing for 2019

The Training Program will continue to be busy in 2019 as laboratories transition to the revised ISO/IEC 17025:2017 standard.

Early in 2019 a new course for experienced Internal Auditors will be introduced.

Auditing Against the ISO/IEC 17025:2017 standard will be a highly interactive course that will allow experienced auditors to participate in discussions and work on

case studies covering the new or revised requirements in the 2017 standard.

The Laboratory webinar series will continue to cover topics related to understanding the revised ISO/IEC 17025:2017 standard.

Additional Information

Course descriptions, registrations details and the training schedule can be found at www.cala.ca/training.

International Activity

Services Provided Internationally

In 2018, CALA delivered proficiency testing and/or accreditation services to 49 laboratories located outside Canada (a decrease of 4 from 2017), mostly in the rest of the Americas as shown in Figure 7. Nine (9) of these laboratories are in the accreditation program and 40 are in the proficiency testing program only. The CALA Training Program also sold services to participants in 9 countries, including Chile, Philippines, and the United States.

Mutual Recognition Arrangements

CALA is signatory to two (2) international Mutual Recognition Arrangements or MRAs: the Asia Pacific Accreditation Cooperation (APAC) (formerly, the Asia Pacific Laboratory Accreditation Cooperation or APLAC) and the International Laboratory Accreditation Cooperation (ILAC). As a signatory to these arrangements, the acceptance of Canadian laboratory test results nationally and around the world is promoted.

More and more regulations and customers require accreditation by an accreditation body that is signatory to ILAC. Therefore, maintaining CALA's signatory status to

ILAC is critical for CALA clients. However, there is a cost to maintaining this signatory status. As a signatory to both APAC and ILAC MRAs, there are requirements and expectations that CALA will contribute to the operation of both APAC and ILAC. This involves active involvement in international meetings, sitting on committees, reviewing documents, and voting on ballots. In 2018, CALA staff participated in the following meetings:

- APLAC (now APAC) General Assembly – Kyoto, Japan.
- Two (2) ILAC Accreditation Issues Committee Meetings/Laboratory Committee meetings/PT Consultative Group meeting – Frankfurt, Germany and Singapore.

A key activity that is critical to the MRA process is the evaluation of accreditation bodies to ISO/IEC 17011 – Conformity Assessment – *General requirements for accreditation bodies accrediting conformity assessment bodies*; to this end, three (3) CALA staff volunteer as APAC Evaluators; two (2) of them are designated as Lead Evaluators.

Figure 7 Distribution of international laboratories receiving PT and Accreditation services from CALA, and countries participating in CALA training.



Appendix A

Summary of Proficiency Testing Performance

The following tables provide details of success rates for each test group. The first two (Tables A1 and A2) reflect the entire program, while the last two (Tables A3 and A4) are for laboratories licensed by the Ontario Ministry of the Environment,

Conservation and Parks (MECP) under the Ontario *Safe Drinking Water Act* (OSDWA). Note that non-reported results are not included among the failures in these estimates as these are sometimes related to registration changes after the study has started.

Table A1 Success rates for all laboratories participating in the January 2018 and June 2018 rounds.

Total Program	January 2018		June 2018	
	Tests	Success %	Tests	Success %
Water				
C06A-OCPs	352	91	361	97
C06B-PCBs	133	94	132	92
C07-PAHs	890	94	937	92
C16-BTEX/THMs/VOCs	2192	95	2253	91
C22-OP Pesticides	360	96	375	93
C24-Aryloxy acid pesticides	128	96	136	98
C25-Phenolics	102	99	102	98
C27-Glyphosate	15	93	16	87
C29-Aldicarb	13	92	12	83
C34-Total Oil and Grease	98	92	104	92
C40A-PHCs	185	89	174	90
C40B-PHCs	121	88	127	91
C41-Hexavalent Chromium	30	93	34	79
Oil				
C08-Total PCBs	146	82	144	80
Air Filter				
C09-Metals	58	100	66	100
Soil/Sediment				
C17-Metals	1396	94	1426	88
C18-PAHs	787	93	868	93
C31A-PHCs/BTEX	365	90	379	92
C31B-PHCs	200	97	213	89
C35-PCBs	138	95	137	91
C36-VOCs*	1331	95	1294	92
C38-TCLP VOCs	184	87	158	87
C39-TCLP Inorganics	454	90	419	90
C43 Solids in Soil	Pilot		Pilot	
C44 Nutrients in Soil	Pilot		Pilot	
C45 Anions in Soil	Pilot		Pilot	
Occupational Health				
C20-Asbestos	102	84	113	78

Table A2. Success rates for all laboratories participating in the March 2018 and October 2018 rounds.

Total Program	March 2018		October 2018	
	Tests	Success %	Tests	Success %
Water (Inorganic)				
C01A-Major ions	1632	91	1664	89
C01B-Simple Nutrients	502	92	515	90
C02A-Metals	2904	92	2847	94
C02B-Metals (high range)	304	96	326	91
C02C-Metals (Total)	1378	95	1403	96
C03-Complex Nutrients	209	92	216	88
C04A-Solids	382	95	392	94
C04B-BOD	226	92	225	92
C04C-Turbidity	120	93	119	87
C04D-COD	101	87	106	90
C14-Cyanide	40	80	38	92
C15-pH	263	97	270	94
C19-Mercury	89	92	89	96
C32-Chlorine	135	94	136	92
C33-Total Phenolics	33	91	33	88
C37-True Colour	67	94	65	88
C42-Sulphide	27	96	29	100
Water (Microbiology)				
C05A-Microbiology	542	92	538	95
C05B-Microbiology P/A	89	98	95	88
Water (Toxicology)				
C11-Trout	20	95	21	100
C12-Daphnia	21	95	22	100
C13-Microtox	25	96	26	92
Occupational Health				
C20-Asbestos	111	72	120	77

Table A3 Success rates for OSDWA laboratories participating in the January 2018 and June 2018 rounds.

OSDWA Laboratories	January 2018		June 2018	
	Tests	Success %	Tests	Success %
Water (Organic)				
C06A-OCPs	122	99	122	100
C06B-PCBs	29	100	29	100
C07-PAHs	141	99	140	100
C16-BTEX/THMs/VOCs	513	100	516	98
C22-OP Pesticides	174	97	173	98
C24-Aryloxy acid Pesticides	62	98	68	96
C25-Phenolics	44	100	44	98
C27-Glyphosate	9	100	9	89
C29-Aldicarb	9	89	8	87
C34- Oil and Grease	17	100	17	100
C40A-PHCs	15	100	15	100
C40B-PHCs	18	100	18	94
C41-Hexavalent Chromium	6	83	5	80

Table A4 Success rates for OSDWA laboratories participating in the March 2018 and October 2018 rounds.

OSDWA Laboratories	March 2018		October 2018	
	Tests	Success %	Tests	Success %
Water (Inorganics)				
C01A- Major Ions	254	100	255	96
C01B- NH ₃ /PO ₄ /DOC	97	97	97	97
C02A- Metals	485	98	507	98
C02C- Total Metals	253	99	251	90
C03- TKN/TP	33	100	31	94
C04A-Solids	41	100	40	100
C04B-BOD	21	100	19	100
C04C- Turbidity	22	95	21	86
C04D-COD	10	90	10	100
C14-Cyanide	37	100	12	100
C15-pH	37	100	37	100
C19-Mercury	19	95	19	100
C32-Chlorine	18	94	17	100
C33- Total Phenolics	10	100	10	100
C37-True Colour	14	100	14	100
C42-Sulphide	4	100	9	100
Water (Microbiology)				
C05A- Microbiology	133	99	131	99
C05B- Microbiology P/A	22	100	22	100





