NATIONAL GUIDELINE FOR GEOSCIENTIST-IN-TRAINING PROGRAMS

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1 PREAMBLE

Geoscience is a self-regulated profession in ten provincial and territorial Canadian jurisdictions. (Yukon and PEI are the exceptions). In seven of the ten jurisdictions, geoscience is regulated under joint legislation with engineering, while in the remaining three (Ontario, Quebec and Nova Scotia), geoscience is regulated under separate legislation. In each case, the regulatory associations have a mandate to regulate the practice of geoscience and register professional geoscientists.

The provincial and territorial regulatory associations of professional geoscientists are the constituent associations (CAs) members of Geoscientists Canada.

The Canadian Geoscience Standards Board is an advisory committee to Geoscientists Canada and, together they provide a co-ordinating function, fostering mutual recognition and encouraging the greatest possible commonality in geoscience regulation. Geoscientists Canada’s *Geoscience Knowledge and Experience Requirements for Professional Registration in Canada*¹ ("GKE") is the primary reference for the evaluation of applicants for professional registration.

Geoscientists Canada guidelines are intended to be an expression of general principles, which have a broad basis of consensus, while recognizing and supporting the autonomy of each CA to administer its geoscience legislation. Geoscientists Canada guidelines enunciate the principles of an issue but leave the detailed applications, policies, practices, and exceptions to the CAs.

This guideline has been prepared by Geoscientists Canada in consultation with the CAs.

The CA’s of Geoscientists Canada are:

- Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG)
- Association of Professional Engineers and Geoscientist of Alberta (APEGA)
- Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)
- Association of Professional Engineers and Geoscientists of Manitoba (APEGM)
- Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS)
- Association of Professional Geoscientists of Ontario (APGO)
- Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
- Association of Professional Geoscientists of Nova Scotia (APGNS)
- Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL)

This guideline is modelled closely on Engineers Canada’s guideline entitled *National Guideline for Engineer-in-Training Program*, published in 2013. Geoscientists Canada wishes to acknowledge the work of Engineers Canada and thanks them for permission to adapt their text and structure in constructing this geoscience guideline.

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2 INTRODUCTION

Provincial/territorial geoscience legislation requires individuals who practice geoscience in each jurisdiction to be licensed by the appropriate geoscience professional association. To be licensed, applicants must satisfy the following requirements, as detailed in the Geoscience Knowledge and Experience Requirements for Professional Registration in Canada ("GKE"):

- be academically qualified;
- have demonstrated a minimum of 48 months of acceptable geoscience work experience;
- be competent in the language of business in the jurisdiction of practice;
- be of good character, reputation and conduct; and
- have knowledge of professional practice issues, including law and ethics.

Once specified academic qualifications have been obtained, the remaining requirements (with the possible exception of language competency) are met during a period of time - normally a minimum of 48 months ("training period") during which the applicant should be a geoscientist-in-training (referred to in short as "GIT", pronounced "gee-i-tee")\(^2\). It is during this period that the GIT completes the development of all minimum competencies necessary for entry to independent professional practice, as illustrated in Figure 1.

\(^2\) In some jurisdictions the term Member-in-Training is used, abbreviated to MIT and pronounced emm-i-tee

Figure 1: Geoscientists-in-Training Program - where it fits in
2.1 Purpose of the Geoscientist-in-Training Program

The purpose of the Geoscientist-in-Training Program is to aid development of the individual, from the point of being academically qualified (by completion of a university geoscience program), to point when they have sufficient on-the-job geoscience work experience for consideration for professional licensure. In other words, development has progressed to the point where the individual is equipped to apply to qualify as a professional geoscientist, scientifically and professionally capable of independent practice and of assuming full responsibility for their own work.

There are no accredited university geoscience programs in Canada. To enter a Geoscientist-in-Training Program, applicants must first demonstrate completion of all necessary academic requirements, as specified in the GKE. This is achieved by applying at one of the associations to enter their program and to become a GIT. This includes arranging university transcripts be provided and by submitting other requested information.

The Geoscientist-in-Training Program is structured to help individuals meet geoscience work experience requirements and develop and demonstrate knowledge of professionalism and ethics. It also helps build an understanding of relationships critical in professional practice - such as relationships with other professionals, with the employer and/or clients, with the greater geoscience community, and with society, as illustrated in Figure 2.

While the Geoscientist-in-Training Program contributes to the building of these key relationships in different ways, it is through participation that the GIT becomes the driving force behind his or her own success.
2.2 Value of the Geoscientist-in-Training Program

The value of the Geoscientist-in-Training Program to the individual is the guidance provided to help ensure that quality experience is obtained, professionalism and ethics are developed, and licensure is achieved as seamlessly as possible. The Geoscientist-in-Training Program also introduces the concept of lifelong learning to maintain and demonstrate professional competence; it also emphasizes the importance of self-regulation.

The value of the Geoscientist-in-Training Program to the employer is it results in a professional geoscientist who has the necessary competencies to practise independently. Employers gain added insight into the geoscience profession, gain understanding of the professional needs of their geoscience staff and benefit from building a cadre of professionals in-house.

The value of the Geoscientist-in-Training Program to society is that the GIT will have gained a thorough understanding of the impact of his or her actions on the safeguarding of life, health, property, economic interests, public welfare and the environment. The GIT will have learned to contribute to society in a meaningful and responsible manner.

The CA will benefit from having a Geoscientist-in-Training Program that brings geoscience graduates into the profession, enables it to monitor their work experience and provide them with meaningful feedback.
There are also benefits to the entire geoscience profession, including:

- licensees who are better prepared and more professionally motivated at the time of full registration;
- fewer difficult or borderline cases for determination at professional admission;
- higher quality assurance with respect to admitted candidates; and
- increased interaction and relevance with employers.

This guideline provides the framework for the development and implementation of a Geoscientist-in-Training Program. It is provided to the CAs in order to promote a common basis for such programs. By adopting this Guideline, the CAs will be helping to ensure commonality of all Geoscientist-in-Training Programs in Canada.

3 ROUTE TO LICENSURE THROUGH GEOSCIENTIST-IN-TRAINING PROGRAM

Candidates seeking professional geoscience licensure in Canada have varied backgrounds and as a result there are alternative pathways to licensure; similarly there are alternative pathways through the Geoscientist-in-Training Program. In general, all candidates for licensure should be encouraged to proceed through the Geoscientist-in-Training Program to take advantage of the guidance by the association, supervisors and/or mentors that it offers. Following the program ensures GITs are gaining the relevant geoscience work experience required to fully develop all the competencies required to satisfy admissions requirements.

The guidance that the program offers also includes how to demonstrate geoscience work experience as well as how to present the necessary information to the CA.

Candidates, who need to gain Canadian experience, in spite of having many years of experience elsewhere, should also be encouraged to enrol in the Geoscientist-in-Training Program for the time required.

It is recognized that not all applicants for licensure will be enrolled in a Geoscientist-in-Training Program; nonetheless, employers, supervisors, mentors and the associations should be reminded that the required elements of the Geoscientist-in-Training Program apply to all applicants.

During their time as a GIT, individuals will acquire a life-long learning ethos, achieve participation-related development, and prepare for and write the practice and ethics exam - generally referred to as the Professional Practice Examination.
4 GEOSCIENCE WORK EXPERIENCE

4.1 Geoscience Work Experience

A minimum of forty-eight (48) months of acceptable, cumulative and progressive, geoscience work experience, including at least one year in a Canadian or equivalent work environment, is required to develop fully all competencies necessary for registration as a Professional Geoscientist. The Canadian experience requirement is to ensure that the applicant has a good knowledge of Canadian practices.

The GKE characterizes meeting the geoscience work experience requirement as demonstrating evidence of the following high level elements:

- sound professional judgment,
- the ability to function in a multi-disciplinary teams,
- an ability to recognize their own limitations, and
- awareness of the importance of quality assurance and control, accuracy, thoroughness, critical thought and diligence in their work.

Geoscientists Canada’s Competency Profile for Professional Geoscientists at Entry to Practice sets out the full list of the competencies that are expected for professional practice as a geoscientist, (Competencies are currently achieved by completing the requirements outlined in the GKE).

Applicants demonstrate that they meet geoscientist competencies relating to work experience by providing descriptions of situations from their geoscience practice activities where they have applied particular competencies. The demonstration of competencies allow the professional association to assess the quality of geoscience work experience, by looking not just at what an applicant has done, but by also looking at how and why tasks are completed. The method that each association uses to assess the geoscience work experience requirements varies.

As set out in the GKE, cumulative and progressive work experience should include, but not be limited to:

1. training and familiarization, which may include professional development, logistics management and other roles and responsibilities related to geoscience project training;
2. practical experience, which may include field/lab data collection, project function and operation, management of project limitations, project time constraints, project costs, analysis of data reliability and uncertainty, QA/QC, equipment maintenance, safety, environmental impact, and hazard and risk recognition, assessment and mitigation;

As specified in the GKE....“At least 12 months of geoscience practice experience must be obtained either working in Canada, or in a working environment that is equivalent to that which might be obtained by working in Canada”.

3. **Application of geoscience theory**, which may include development of concepts, analysis/evaluation of geologic data (maps, graphs, tables, etc.), result integration/synthesis, and testing/implementation;

4. **Geoscience project management**, which may include planning, scheduling, budgeting, supervision, project control, safety and risk assessment, assessment and mitigation, and leadership;

5. **Communication skills**, which may include written work and oral presentations to a range of audiences (superiors, co-workers, government regulators, clients and general public) on a variety of scales (from daily record keeping to major reports);

6. **Professional accountability and ethical responsibilities**, recognition of roles and responsibilities, adherence to the Code of Ethics, and compliance with respect to the public, the profession and the client/employer; and

7. **Awareness of societal implications of geoscience**, which may include the recognition of geoscience value and benefits, the inter-relationship between society and the planet Earth, government regulations, environmental impacts, economic well-being, safety issues, geoscience education, and geoscience industries.

Geoscience work experience normally should be obtained while applicants are enrolled as a GIT, to help ensure that they obtain the guidance and supervision necessary to prepare them scientifically and professionally for licensing and independent professional practice.

Under the Geoscientist-in-Training Program, every GIT should preferably have at all times a supervisor who is a professional geoscientist, recognizing the GIT may have several different direct supervisors at different times as they gain their work experience. Supervisors provide scientific and professional guidance to the GIT, and assume responsibility for the work done by the GIT. The role of the supervisor is explained further in Appendix A.

Ideally professional geoscientists should also be assigned to the GIT to serve as their mentors for the duration of the Geoscientist-in-Training Program. The mentor should provide the guidance that GIT requires to help ensure that he or she is aware of geoscience experience related competencies and is engaged in work that will allow the applicant to demonstrate these competencies. The role of the mentor is further explained in Appendix A.

GITs should be expected to achieve the full range and level of competencies required as they accumulate work experience. The association should provide guidance and feedback to the GIT during this process.

The reporting and feedback process may include written or on-line reports or diaries and should provide the GIT with an indication of his or her progress to date. This progress and all associated documentation, should be transferable, should the GIT relocate or transfer, as a GIT, to another jurisdiction. Experience obtained working in a jurisdiction other than the one in which the GIT is part of a program should be acceptable for consideration, as should suitably supervised experience obtaining outside Canada.

### 4.2 Participation-Related Development

The GIT should be encouraged to include participation-related activities in their development. The overall purpose of participation-related activity is to help ensure that the GIT develops into a professional geoscientist who is a well-rounded member of their community (where community can include geographic location, geoscientific community, or
industry or practice sector.) who understands and appreciates the importance of volunteering to the life of a professional. More specifically, the GIT’s community participation should allow for:

- an appreciation of the importance of voluntary service to, and on behalf of, the geoscience profession and contribution to the geoscience profession by a GIT;
- the development of interpersonal skills, such as organizational, teamwork, and delegation skills outside of the workplace; and
- an improved awareness of the contributions of professional geoscientists to society, as well as contributions to society by the GIT.

A description of activities that allow for participation-related development is provided in Appendix B.

4.3 Reporting And Evaluating

A significant component of the Geoscientist-in-Training Program is reporting on and evaluating geoscience work experience as it relates to competencies acquisition. GIT’s should record their work experience and professional development activities on an on-going basis and report these activities as required. The geoscience regulatory associations should provide timely feedback and guidance to GIT’s on their progression towards satisfying the requirements for registration as a professional geoscientist.

Each association has established its own reporting requirements. For more details, consult the relevant regulatory association.

Because the Geoscientist-in-Training Program requires the supervisor’s support and cooperation, and involves their full awareness of the importance of offering the GIT cumulative and progressive work experience, the association should ensure that all employers and supervisors are aware of the requirements of the Geoscientist-in-Training Program. The association should seek the assistance and support of employers to ensure that GIT’s have a professional geoscientist supervisor who will co-operate with the Program, and that the GIT training employers offer provides an appropriate range of geoscientist development activities.

The association should ensure that all supervisors and mentors are aware of their responsibilities within the context of the Geoscientist-in-Training Program, as described in Appendix B.

5 PROFESSIONALISM AND ETHICS

The GIT must develop and demonstrate knowledge of professionalism and ethics. This may be assessed through interviews, reports from referees, the GIT reporting or diaries documenting on his or her work experience. GITs also must prepare for, and must pass, the Professional Practice Examination.

The work environment of the GIT should provide an opportunity to develop an understanding and observe the application of the laws and regulations governing the practice of geoscience in the jurisdiction (or jurisdictions) of practice, and to gain an appreciation of business and social ethics in a professional geoscience work environment.
This will enable the GIT to understand:

- the value of the title of Professional Geoscientist (P.Geo) in their work;
- the need to develop a societal and environmental awareness;
- the role of the profession of geoscience in society;
- how to apply the concepts of professionalism with respect to protecting the public interest;
- an understanding of the importance of a self-regulating profession and the need to support the professional association in return for the privilege of practising in a self-regulated profession ("right to title" and "license to practice");
- the importance of working, at all times, within the limits of professional competence, personal training and experience;
- the concepts of responsibility, accountability and liability; and
- the laws and regulations governing the practice of the profession in the jurisdiction(s).
The following interpretations provide more detailed descriptions of the principal roles included in the guideline:

- The GIT
- The Supervisor
- The Mentor

### 6.1 The GIT

The GIT is the candidate for licensure who has met the academic requirements and been assessed for good character, and is in their period of on-the-job training ("training period") to fully develop all the competencies required for professional licensure. These requirements include obtaining an understanding of:

- the application of the geoscience legislation (the Act, Regulations and by-laws) and professional Code of Ethics which regulate professional geoscience practice;
- the responsibilities and potential liabilities of participating in a self-regulated profession;
- the importance of the geoscientist’s relationship with clients, employers, other professionals, the association and the public;
- the importance of continuing professional development to maintain and enhance scientific competence, and organizational, personal, team, and business skills;
- the limits of one’s own knowledge, both scientifically and in terms of “soft skills”; and
- local laws, regulations, practices and conditions.

The work experience-based training period, gives the GIT exposure to these elements and provides them with time to fully understand and actively demonstrate their application.

By the end of the training period, the GIT should have developed into a fully qualified professional geoscientist candidate who has all the scientific and professional competencies needed to apply for a professional licence and then take direct responsibility for their practice as an independent scientist.

### 6.2 Role of the GIT

The GIT is responsible for complying with the Geoscientists-in-Training Program and gaining appropriate experience, advice, and exposure to geoscience practice activities at the level and across the range of competencies required for licensure. In addition, through practice experience the GIT will gain knowledge of geoscience ethics and professionalism.

The GIT works under the direction of a supervisor (or supervisors), and may also have a mentor (or mentors) for further guidance (see related sections, below).
**GIT’s should:**

- understand and comply with the requirements of their association’s Geoscientist-in-Training Program;
- be an active participant in their own training process;
- document and report their work experience and professional development activities in a form and format that is acceptable to the association;
- develop effective communication, decision-making and leadership skills;
- use their intellectual and analytical abilities to further their professional development; and
- take responsibility for the development of their own career.

In the end, the success of the GIT training period rests primarily on the interest, enthusiasm, self-motivation and curiosity of the individual GIT.

Geoscience regulation allows a GIT to work on geoscience projects provided that the work is conducted under the supervision of a professional geoscientist who reviews and takes responsibility for the work. This person does not have to be the direct supervisor of the GIT.

GIT’s may not engage in the unsupervised practice of geoscience or independent geoscience practice.
You are a GIT working in a given Canadian jurisdiction
Are you (will you be) doing work normally reserved for a P.Geo?

If, Yes

Then your work needs to be done under the direct supervision of a P.Geo

If your direct supervisor is a P.Geo, your situation is within the law and your **Supervisor** is professionally responsible for your work. You may also want to find a **Mentor** (also a P.Geo) for additional professional guidance

If your direct supervisor is not a P.Geo., be sure that a P.Geo, can oversee your geoscience work or contact your association.

**Be careful!** Only a P.Geo can take responsibility for your geoscience work

If, No

Ensure that your work complies with the work requirements of your association for obtaining your P.Geo license

For the remainder of your GIT Program, (or at a minimum until the end of this employment), it is strongly recommended that you find a **Mentor** (who is a P.Geo.) for professional guidance
6.3 THE SUPERVISOR

A supervisor is normally a professional geoscientist who oversees the work of the GIT. A supervisor has the authority to give instructions and assign work to subordinates and takes responsibility for this work.

6.4 Role of the Supervisor

The role of the supervisor is to assign appropriate geoscience work to a GIT in order to assist in their development as an independent practitioner. A good supervisor will consider the welfare of employees as well as the work that must be accomplished for the success of the organization. The supervisor also plays a role in the on-the-job training and development of the GIT.

In order to best assist the GIT in their development as an independent practitioner, supervisors should be professional geoscientists. In cases where this is not possible, the geoscience work of the GIT must still be reviewed by a professional geoscientist. See the section on the non-geoscientist supervisor below.

**All Supervisors should:**

- ensure the assigned work provides opportunities for the GIT to complete each of the geoscience experience requirements;
- provide an example of good work practices and organizational skills, such as making field observations and taking measurements, note taking, recording calculations, and developing good data handling and data security habits;
- be aware of the experience requirements of the association, including necessary work experience record keeping;
- ensure that assignments are cumulative and progressive in complexity and responsibility, and lead towards the GIT becoming an independent professional;
- assign work appropriate to the abilities of the GIT;
- provide advice and support that allows for the development of the GIT;
- keep the GIT apprised of their performance and make suggestions for improvement;
- provide management development and practical experience opportunities;
- increase awareness of activities and duties at different levels of the organization;
- encourage participation in industry, scientific and professional societies; and
- assist the GIT in locating career development and scientific training opportunities.

**Professional Geoscientist Supervisors should also:**

- take responsibility for the work of the GIT;
- be in the same area of practice as the GIT;
- ensure the accuracy of the work from a scientific perspective;
- promote the geoscientific profession and the aims of the association to GIT’s;
- demonstrate the importance of understanding and subscribing to Codes of Ethics and practising to the benefit of the public;
• certify the documentation of the geoscience work experience prepared by the GIT for the purpose of obtaining professional licensure; and
• provide a reference or act as a referee for the GIT as part of the licensing process.

Non-Geoscientist Supervisors:

• should ensure that a registered professional geoscientist is assigned to take responsibility for the geoscience work of the GIT; and
• are encouraged to contact the regulatory association to ensure that all of the responsibilities for the supervision of a GIT are met.

6.5 THE MENTOR

Mentoring is the planned pairing of a more skilled or experienced person with a lesser skilled or inexperienced person. The goal is for the less experienced person to grow and develop specific abilities to reach long-term objectives. The mentoring process should be a positive one for both the GIT and the mentor.

6.6 Role of the Mentor

The mentor's role should not take the place of the employer's training or supervision. It is, in general, a complementary role to help guide, counsel, provide inspiration and be a Professional Geoscientist role model for the GIT.

A Mentor should:

• assist new graduates with the transition from the university setting to professional practice;
• provide assistance with the scientific skills development of the GIT;
• provide assistance with non-scientific areas of the Geoscientist-in-Training Program such as communication and interpersonal skills, management skills, and understanding the societal impact of practicing the profession;
• promote the profession and the aims of the association to GIT’s;
• orient GIT’s to typical Canadian business culture and practices;
• assist GIT’s to achieve professional licensure;
• help to broaden the GIT’s knowledge of the science of geoscience as a whole;
• encourage the GIT to consider options for career and professional development;
• guide the GIT in finding resolutions to challenging situations;
• encourage participation in scientific, industry, and professional societies;
• hold all discussions with GIT confidential, unless otherwise agreed upon with the GIT; and
• regularly meet with the GIT to discuss progress on goals and objectives that have been set by the GIT.

5 In some jurisdictions, the term 'mentor' may be used to designate the professional geoscientist who takes responsibility for the geoscience work in the case where the GIT’s supervisor is not a license holder. However, in this guide, the term is more broadly defined as an experienced and trusted adviser or guide.
A Mentor should not:

- replace formal professional development;
- replace formal scientific training;
- provide an avenue for rapid advancement through the ranks of an organization;
- provide an alternative to developing effective and professional relationships with supervisors;
- solve the GIT’s problems, (A mentor assists the GIT by providing guidance only);
- replace a formal performance evaluation; or
- replace the admissions or review board / committee, unless the mentor has been given a specific mandate to review a GIT’s competencies on behalf of the association.

Requirements to Become a Mentor:

The ideal mentor is a registered professional geoscientist who has been licensed as a fully practising professional for more than seven (7) years. In addition, the mentor should:

- display maturity;
- have experience in mentoring techniques;
- be aware of the responsibilities of mentoring; and
- be able to provide references attesting to their own professional conduct

The mentor should be at arms-length from the GIT (i.e. not a relative, friend, or supervisor), but in situations where the supervisor is not a P.Geo, the Mentor can be a person who actually accepts responsibility for the GIT’s work.

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6 As defined in this interpretive guideline, the mentor is not intended to take responsibility, scientific or otherwise, for the work of the GIT. The mentor’s role is to encourage and guide.
APPENDIX B - APPROACHES TO PARTICIPATION-RELATED DEVELOPMENT

The following are examples of activities that may provide participation-related training:

- courses in general personal development and soft skills (i.e. additional knowledge not directly related to employment or geoscientific skills, but useful for rounding out a person's professional skill set);
- networking opportunities for GIT's (e.g. scientific society memberships, association chapter membership, interfacing with students at university, GIT groups to discuss scientific matters, non-scientific matters or just socialize);
- outreach in universities/schools;
- participation in scientific societies and at the association; and
- outreach in the community.

Participation could be divided into:

- Professional/Scientific Service; and
- Community Service

The following are examples of activities in these areas:

Professional/Scientific Service:

- Serve on a scientific society committee;
- Participate in organizing a session or giving a paper/making a presentation at a scientific conference;
- Assisting with field trips, seminars, workshops and short-courses;
- Publishing in scientific journals;
- Serve on a professional association committee;
- Participate by making a presentation at an association general or chapter meeting;
- Provide job shadowing for a student;
- Mentor a student outside the workplace;
- Assist at a science fair;
- Prepare and deliver a presentation on geoscience as a career to an elementary, junior or senior high school class, or to a youth organization;
- Participate in career days or a careers symposium by staffing a booth and/or preparing and setting up a display on geoscience; or
- Sponsor and host a geoscience student at an annual geoscience society or association dinner.

Community Service:

- Hold a board position and actively participate in the operation of a local not-for-profit, charity, community club, cultural group, or faith-based organization;
- Coach or manage a sports team or lead a youth group;
- Participate in a community volunteer organization;
• Assist in the organization and production (sound, lights, stage, etc.) of a community event such as a play or concert; or
• Organize and co-ordinate a cultural, arts or charity event.
8 Association Websites

Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (NAPEG)
http://www.napeq.nt.ca

Association of Professional Engineers and Geoscientist of Alberta (APEGA)
http://www.apeqa.ca

Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)
http://www.apeq.bc.ca

Association of Professional Engineers and Geoscientists of Manitoba (APEGM)
http://www.apeqm.mb.ca

Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS)
http://www.apegs.ca

Association of Professional Geoscientists of Ontario (APGO)
http://www.apgo.net

Association of Professional Engineers and Geoscientists of New Brunswick (APEGNB)
http://www.apegnb.ca

Association of Professional Geoscientists of Nova Scotia (APGNS)
http://www.geoscientistsns.ca

Professional Engineers and Geoscientists of Newfoundland and Labrador (PEGNL)
http://www.pegnl.ca