



GENERAL

SUSTAINABILITY

VERSION 2.0
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**ENGINEERS &
GEOSCIENTISTS**
BRITISH COLUMBIA

PREFACE

These *Professional Practice Guidelines – Sustainability* were developed by Engineers and Geoscientists British Columbia to provide guidance to Engineering/Geoscience Professionals and Registrant Firms on how to incorporate sustainability in their professional practice. These guidelines are distinct from other practice guidelines as they are principles-type and overarching and address broader social and cultural matters that impact professional practice. These guidelines form part of Engineers and Geoscientists BC’s ongoing commitment to maintaining the quality of professional services that Engineering/Geoscience Professionals provide to their clients and the public.

These guidelines were first published in 1995 to address the topic of sustainability in professional practice. They were updated in 2016 to reflect the state of practice in relation to sustainability and to include linkages to 2006 Engineers Canada’s National Guideline on Environment and Sustainability, which has been superseded by the National Guideline on Sustainable Development and Environmental

Stewardship for Professional Engineers in September 2016.

This current revision provides additional clarity with examples of actions that individual and Firm Registrants can take to bring the “lens of sustainability” to their practice (i.e., a lens that considers a longer-term view by taking into account environmental, social, and economic pillars of sustainability rather than focusing on short-term cost benefits).

These guidelines describe the expectations and obligations of professional practice in relation to sustainability to be followed at the time they were prepared. They contain key sustainability principles, and Engineering/Geoscience Professionals are expected to consider the objectives and intent of these guidelines while using their professional judgment when incorporating the guidance to a specific situation. This is a living document that will be revised and updated as required to reflect developments in sustainability as they relate to the professions of engineering and geoscience.

TABLE OF CONTENTS

PREFACE	i		
ABBREVIATIONS	iv		
DEFINED TERMS	v		
VERSION HISTORY	vi		
1.0 INTRODUCTION	1	2.1.3 Principle 3: Collaborate with Peers and Experts with Diverse Backgrounds from Concept to Completion	8
1.1 PURPOSE OF THESE GUIDELINES	2	2.1.4 Principle 4: Develop and Prepare Clear Justifications to Implement Sustainable Solutions	9
1.2 ROLE OF ENGINEERS AND GEOSCIENTISTS BC	2	2.1.5 Principle 5: Assess Sustainability Performance and Identity Opportunities for Improvement	10
1.3 SCOPE AND APPLICABILITY OF THESE GUIDELINES	3	2.2 CONSIDERATION OF RISK	10
1.4 SUSTAINABILITY CONTEXT	3	3.0 ROLES AND RESPONSIBILITIES	11
1.4.1 What is Sustainability?	3	3.1 ENGINEERING/GEOSCIENCE PROFESSIONALS	11
1.4.2 Sustainability Landscape	4	3.2 REGISTRANT FIRMS	15
1.4.3 UNDRIP	4	3.2.1 Bylaws	15
1.5 ACKNOWLEDGEMENTS	5	3.2.2 Code of Ethics	15
2.0 GUIDELINES FOR PROFESSIONAL PRACTICE	6	3.2.3 Sustainability Considerations for Registrant Firms	15
2.1 SUSTAINABILITY PRINCIPLES	6	4.0 REFERENCES AND RELATED DOCUMENTS	19
2.1.1 Principle 1: Maintain a Current Knowledge of Sustainability	6	4.1 LEGISLATION	19
2.1.2 Principle 2: Integrate Sustainability into Professional Practice	7	4.2 REFERENCES	19
		5.0 APPENDIX	21

LIST OF APPENDICES

Appendix A: Engineers and Geoscientists BC Sustainability Initiatives	22
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LIST OF TABLES

Table 1: Examples of Sustainability Considerations for Engineering/Geoscience Professionals.....	12
Table 2: Examples of Sustainability Considerations for Registrant Firms.....	16

ABBREVIATIONS

ABBREVIATION	TERM
BC	British Columbia
DRIPA	Declaration on the Rights of Indigenous Peoples Act (BC)
UN	United Nations
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
SDGs	Sustainable Development Goals

DEFINED TERMS

The following definitions are specific to these guidelines. These words and terms are capitalized throughout the document.

TERM	DEFINITION
Act	<i>Professional Governance Act</i> [SBC 2018], Chapter 47.
Bylaws	The Bylaws of Engineers and Geoscientists BC made under the <i>Act</i> .
Engineering/Geoscience Professional(s)	Professional engineers, professional geoscientists, professional licensees engineering, professional licensees geoscience, and any other individuals registered or licensed by Engineers and Geoscientists BC as a “professional registrant” as defined in Part 1 of the Bylaws.
Engineers and Geoscientists BC	The Association of Professional Engineers and Geoscientists of the Province of British Columbia, operating as Engineers and Geoscientists BC.
Registrant	Means the same as defined in Schedule 1, Section 5 of the <i>Act</i> .
Registrant Firm	A firm that is registered with Engineers and Geoscientists BC as a Registrant.

VERSION HISTORY

VERSION NUMBER	PUBLISHED DATE	DESCRIPTION OF CHANGES
2.0	April 20, 2023	The purpose of this revision is to ensure the guidelines are up to date and to incorporate content relevant to the <i>Professional Governance Act</i> , including guidance for Registrant Firms.
1.1	April 2016	Revised to reflect the state of practice in relation to sustainability and to include linkages to 2006 Engineers Canada's National Guideline on Environment and Sustainability, which has been superseded by the National guideline on sustainable development and environmental stewardship for professional engineers in September 2016.
1.0	1995	Initial Version.

1.0 INTRODUCTION

Engineers and Geoscientists British Columbia is the regulatory and licensing body for the engineering and geoscience professions in British Columbia (BC). To protect the public, Engineers and Geoscientists BC establishes, monitors, and enforces standards for the qualification and practice of its Registrants.

Engineers and Geoscientists BC provides various practice resources to its Registrants to assist them in meeting their professional and ethical obligations under the *Professional Governance Act* (the *Act*) and Engineers and Geoscientists BC Bylaws (Bylaws). Those practice resources include professional practice guidelines, which are produced under the authority of Section 7.3.1 of the Bylaws and are aligned with the Code of Ethics Principle 4.

Each professional practice guideline describes expectations and obligations of professional practice that Engineering/Geoscience Professionals are expected to follow in relation to their specific professional activities. Engineers and Geoscientists BC publishes professional practice guidelines on specific professional activities where additional guidance is deemed necessary. Professional practice guidelines are written by subject matter experts and reviewed by affected and interested parties before publication.

Having regard for professional practice guidelines means that Engineering/Geoscience Professional must follow established and documented procedures to stay informed of, be knowledgeable about, and meet the intent of any professional practice guidelines related to their area of practice. By

carefully considering the objectives and intent of a professional practice guideline, an Engineering/Geoscience Professional can then use their professional judgment when applying the guidance to a specific situation. Where the guidelines refer to professional obligations specified under the *Act*, the Bylaws, and other regulations/legislation, Engineering/Geoscience Professionals must understand that such obligations are mandatory.

These *Professional Practice Guidelines – Sustainability* provide guidance to Engineering/Geoscience Professionals on how to incorporate sustainability in their professional practice.

These guidelines were first published in 1995 and were updated in 2016.

The current revision seeks to do the following:

- incorporate content relevant to the *Act*,
- outline evolving sustainability considerations (e.g., equity, diversity and inclusion, reconciliation, and climate action),
- identify linkages and responsibilities related to the Code of Ethics, and
- provide advice and encouragement to both individual and firm Registrants to deliver sustainable solutions.

This current revision provides additional clarity through examples of actions that individual and firm Registrants can take to bring the “lens of sustainability” to their practice.

1.1 PURPOSE OF THESE GUIDELINES

The purpose of these guidelines is to provide a common understanding of evolving sustainability issues and outline approaches to achieving them across the full breadth of work done by Engineering/Geoscience Professionals. These guidelines set out general concepts and principles on why sustainability is relevant in professional practice and how to consider and integrate them in professional practice. Reference materials on sustainable engineering and geoscience practice are also available on the Engineers and Geoscientists BC website.

These guidelines also explain Engineering/Geoscience Professionals' responsibilities related to society and the environment (as required by the *Act* and set out in the Code of Ethics), and to provide advice and encouragement to Engineering/Geoscience Professionals in delivering more sustainable solutions in their practice.

1.2 ROLE OF ENGINEERS AND GEOSCIENTISTS BC

These guidelines form part of Engineers and Geoscientists BC's ongoing commitment to maintaining the quality of professional services that Engineering/Geoscience Professionals provide to their clients and the public.

Engineers and Geoscientists BC has the statutory duty to serve and protect the public interest as it relates to the practice of professional engineering and professional geoscience, including regulating the conduct of Engineering/Geoscience Professionals. Engineers and Geoscientists BC is responsible for establishing, monitoring, and enforcing the standards

of practice, conduct, and competence for Engineering/Geoscience Professionals. One way that Engineers and Geoscientists BC exercises these responsibilities is by publishing and enforcing the use of professional practice guidelines, as per Section 7.3.1 of the Bylaws.

Guidelines are meant to assist Engineering/Geoscience Professionals in meeting their professional obligations. As such, Engineering/Geoscience Professionals are required to be knowledgeable of, competent in, and meet the intent of professional practice guidelines that are relevant to their area of practice. The *Professional Practice Guidelines - Sustainability* are relevant to all areas of engineering and geoscience.

The writing, review, and publishing process for professional practice guidelines at Engineers and Geoscientists BC is comprehensive. These guidelines were prepared by subject-matter experts and reviewed at various stages by a formal review group, and the final draft underwent a thorough consultation process with various advisory groups and divisions of Engineers and Geoscientists BC. These guidelines and the current revision were then approved by Engineers and Geoscientists BC's Board and, prior to publication, underwent final editorial and legal reviews.

Engineers and Geoscientists BC supports the principle that appropriate financial, professional, and technical resources should be provided (i.e., by the client and/or the employer) to support Engineering/Geoscience Professionals who are responsible for carrying out professional activities. These guidelines may be used to assist in the level of service and terms of reference of an agreement between an Engineering/Geoscience Professional and a client.

Engineers and Geoscientists BC's sustainability initiatives that Engineering/Geoscience Professionals need to know are listed in Appendix.

1.3 SCOPE AND APPLICABILITY OF THESE GUIDELINES

These guidelines provide guidance on professional practice for all Engineering/Geoscience Professionals regarding sustainability. They apply to individual and firm Registrants. These guidelines are not intended to provide technical or systematic instructions; rather, these guidelines outline considerations to be aware of related to incorporating sustainability in professional practice. Engineering/Geoscience Professionals must exercise professional judgment when providing professional services; as such, application of these guidelines will vary depending on the circumstances.

An engineering and geoscience professional's decision not to follow one or more aspects of these guidelines does not necessarily represent a failure to meet professional obligations. For information on how to appropriately depart from the practice guidance within these guidelines, refer to the *Quality Management Guides – Guide to the Standard for the Use of Professional Practice Guidelines* (Engineers and Geoscientists BC 2021a), Section 3.4.2.

1.4 SUSTAINABILITY CONTEXT

1.4.1 WHAT IS SUSTAINABILITY?

A sustainable society meets the needs of people in a resilient economy without compromising the planet's ecological integrity or the needs of future generations.

Sustainability has three pillars that must be considered and integrated in a balanced way:

1. **Environmental:** to stay within the biophysical carrying capacity of our region, country or planet such as minimizing resource use, reducing waste and protecting nature from degradation.
2. **Social:** to maintain and protect social equity, quality of life and the values that we aspire to live by.

3. **Economic:** to ensure long-term access, opportunities and economic participation for all members of society.

The above definition builds on the most widely quoted definition of sustainability and sustainable development that was given by the United Nations' Brundtland Commission on March 20, 1987: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

In general, sustainability requires Engineering/Geoscience Professionals to be prudent about managing resources and requires consideration of the long-term consequences that flow directly and indirectly from human actions. Climate change and its associated impacts have come to the forefront as key issues in sustainability, although sustainability also encompasses considerations such as striving for clean air, water, and soil, reducing waste, protecting oceans, conserving habitats, and preserving nature. The following text box clarifies the relationship between sustainability and climate change:

HOW IS SUSTAINABILITY RELATED TO CLIMATE CHANGE?

While climate change (including climate risk management), is often seen as falling under the "environmental" category of the three pillars of sustainability, climate change is not exclusively an environmental issue. Climate impacts are cross-cutting and do not just fall within sustainability. The impacts of climate change, both its physical impacts—such as heat waves and extreme weather events—and impacts that are related to transitioning to lower carbon and renewable sources of energy, affect all, and have become an important focal point for everyone.

Local, regional, provincial, and national governments are taking steps to reduce emissions through incentive programs, funding, and policies and regulations that include emissions-trading programs, carbon offsets, carbon taxes, and standards on energy efficiency and emissions.

The work done by Engineering/Geoscience Professionals is both impacted by and has the potential to impact climate change. Individual and Firm Registrants should be aware of and consider greenhouse gas (GHG)-related risks and opportunities, and monitor and evaluate the evolving science, technology and policy related to climate change in order to manage risk in professional practice, maintain competitiveness, and stay relevant in changing practice environments.

1.4.2 SUSTAINABILITY LANDSCAPE

Sustainability is a critical issue for engineers and geoscientists across Canada and internationally, not just in BC. Engineering/Geoscience Professionals have an ethical obligation to review their designs for impacts on future generations, including consideration of international guidelines, recommendations and experiences.

Climate change has come to the fore as a key sustainability issue for governments around the world with countries engaged in international negotiations while ramping up their ambitions to reduce GHG emissions to limit global warming and adapt to the changes that are forecast. This has resulted in increased policy action and regulatory levers targeting emissions reduction and climate adaptation. In terms of adaptation, governments are working to improve their understanding of the risks posed by climate change and to develop plans to address these risks. This includes improving resilience to extreme weather events and protecting critical infrastructure. There has also been increased scrutiny in terms of understanding cumulative effects of permitting various development activities and implications for social equity and the protection of environment.

The 2030 Agenda for Sustainable Development launched by the United Nations in 2015 includes 17 broad, all-encompassing, and detailed Sustainable Development Goals (SDGs) and targets centered on stimulating action in areas of critical importance for humanity and the planet. The goals capture all three facets of sustainability:

1. Environmental: climate action – SDG 13, protecting life on land and water – SDGs 14 and 15;
2. Social: gender equality – SDG 5, reduced inequalities – SDG 10; and
3. Economic: responsible consumption and production – SDG 12, industry, innovation and infrastructure – SDG 9.

The SDGs have become benchmarks to measure outcomes for governments, not-for-profit organizations, members of civil society, and investors. The work done by Engineering/Geoscience Professionals and firms contributes—and is inextricably linked—to achieving the SDGs.

1.4.3 UNDRIP

Indigenous traditional cultural knowledge is increasingly being recognized as inherently encompassing most of the aspects and principles of the SDGs. This knowledge has been passed on through generations and is the basis for conservation, sustainable use of resources, education, and a wide range of other activities that sustain societies. In addition, there are specific indicators measuring the progress of implementation of the SDGs that are relevant for – or refer directly to – Indigenous peoples such as eliminating societal disparities and recognizing Indigenous rights to lands, territories, and resources. In other words, achieving the SDGs is inextricably linked to reconciliation with Indigenous peoples.

One such pathway to achieving meaningful reconciliation has been identified within the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), a resolution passed by the United Nations in 2007, which delineates and defines the individual and collective rights of Indigenous Peoples, including their ownership rights to cultural and ceremonial expression, identity, language, employment, health, education, and other issues. It prohibits discrimination and "promotes their full and effective participation in all matters that concern them and their right to remain distinct and to pursue their own visions of economic and social development."

The Canadian and BC governments have recognized and upheld UNDRIP through the establishment of legislation, policies and action plans that advance the implementation of the declaration. The Declaration on the Rights of Indigenous Peoples (DRIPA) became law in BC on November 28, 2019, and the BC government released a Declaration Action Plan in 2022 that outlines how it will bring UNDRIP into harmony with its work over the next five years.

1.5 ACKNOWLEDGEMENTS

This document was reviewed by a group of technical experts, as well as by various Engineering/Geoscience Professionals, advisory groups, and divisions of Engineers and Geoscientists BC. Authorship and review of these guidelines does not necessarily indicate the individuals and/or their employers endorse everything in these guidelines.

Engineers and Geoscientists BC thanks the authors and reviewers of the original document, as well as the authors and reviewers of this revision, for their time and effort in sharing their knowledge and experience.

2.0 GUIDELINES FOR PROFESSIONAL PRACTICE

2.1 SUSTAINABILITY PRINCIPLES

Within their scope of professional practice, Engineering/Geoscience Professionals have a responsibility to the following sustainability principles:

- **Principle 1:** Maintain a current knowledge of sustainability
- **Principle 2:** Integrate sustainability into professional practice
- **Principle 3:** Collaborate with peers and experts with diverse backgrounds from concept to completion
- **Principle 4:** Develop and prepare clear justifications to implement sustainable solutions
- **Principle 5:** Assess sustainability performance and identify opportunities for improvement

2.1.1 PRINCIPLE 1: MAINTAIN A CURRENT KNOWLEDGE OF SUSTAINABILITY

2.1.1.1 Principle 1 Summary

To maintain a current knowledge of sustainability, Engineering/Geoscience Professionals should monitor sustainability issues related to their professional area of expertise, maintain competence with respect to these issues, and seek additional expertise as necessary. The knowledge, concepts and opportunities for sustainable solutions are rapidly evolving and Engineering/Geoscience Professionals should strive to keep their skills and knowledge up to date and advance the understanding of sustainability in their field of practice.

2.1.1.2 Principle 1 Elaboration

When Engineering/Geoscience Professionals strive to stay competent in and advance the understanding of sustainability in their field of practice, this aligns with the foundation of engineering and geoscience work, which is the application of science to solve problems.

Sustainability is a complex concept that involves careful consideration and balancing of three pillars: environmental; economic; and social. Engineering/Geoscience Professionals have identified “lack of knowledge of how to employ sustainability” in their practice as one of the main barriers to the integration of sustainability in their work. Principle 1 emphasizes that ongoing and continuous professional development is an important aspect of sustainability, because the state of the art is constantly advancing.

Engineering/Geoscience Professionals should also be aware that being “current” with respect to sustainability does not always involve new knowledge. Sometimes bringing back older practices and integrating Indigenous ways of knowing improves sustainability. Indigenous ways of knowing are place-based, relationship-based, and contextual. Engineering/Geoscience Professionals should work with local communities to best incorporate Indigenous ways of knowing in all aspects of project development, recognizing that this will look different across all projects and cannot be treated as a checkbox exercise.

The requirement for Engineering/Geoscience Professionals to maintain a current knowledge of sustainability is embodied in the fifth principle of the Code of Ethics, which states that:

“Registrants must maintain competence in relevant specializations, including advances in the regulated practice and relevant science.”

The Registrant's understanding of sustainability will evolve as their appreciation and understanding of natural, economic and social systems and their interrelationships develop through practice. Currently, many Engineering/Geoscience Professionals understand and support the individual pillars of sustainability but may not be familiar with the relationships between these pillars and their own professional practice. Achieving sustainability, however, requires an appreciation of the complex relationships between each of the three pillars of sustainability.

As sustainable solutions are becoming an expectation of Canadian society, Engineering/Geoscience Professionals are increasingly being asked by their clients, their employers and the public to demonstrate competence at the most current level of sustainable practice. There is an opportunity for Engineering/Geoscience Professionals to be leaders at the provincial and national levels. Requirements stipulated by codes of practice are conservative by nature, so Engineering/Geoscience Professionals should not only follow the accepted current standard, but also advocate for new standards where there are clear links to demonstrated improvements in sustainable approaches and solutions.

By maintaining a current knowledge of sustainability, guided by sound, peer-reviewed science as it relates to professional engineering and geoscience practice, Engineering/Geoscience Professionals provide greater long-term value by delivering smart sustainable solutions that extend across disciplinary boundaries and address the wider impacts of the project.

Additional benefits to the public may include:

- Reductions in energy, material use, waste production, and operational costs;
- Proactively managing issues such as adaptation to climate change, mitigation of GHG emissions, and energy/ materials/waste minimization in advance of government regulation on these issues (BC's

regulation of carbon, new building energy codes, etc.); and

- Public endorsement of a project through the engagement of a diverse range of partners including Indigenous Peoples.

It is recognized that individual Engineering/Geoscience Professionals cannot be expected to assume responsibility for incorporating sustainability in work or tasks beyond the scope of their authority. In areas within their scope of authority, however, Engineering/Geoscience Professionals are required to keep their knowledge current and seek appropriate expertise where required (see also Principle 3, below).

2.1.2 PRINCIPLE 2: INTEGRATE SUSTAINABILITY INTO PROFESSIONAL PRACTICE

2.1.2.1 Principle 2 Summary

Integrating sustainability considerations into professional practice reflects the Code of Ethics requirements to hold paramount the safety, health, and welfare of the public and the protection of the environment and promote health and safety within the workplace. Engineering/Geoscience Professionals have a responsibility to inform their employers/clients about sustainability considerations and the potential consequences of not incorporating those considerations to allow them to make informed decisions. Engineering/Geoscience Professionals must consider the combined environmental, social and economic aspects that take into account the direct and indirect impacts over the full project lifecycle.

2.1.2.2 Principle 2 Elaboration

Engineering/Geoscience Professionals have an important responsibility to society. This responsibility is codified in the Code of Ethics, which Engineering/Geoscience Professionals must uphold. The Code of Ethics explicitly requires Engineering/Geoscience Professionals to hold paramount the safety, health and welfare of the public, and the protection of the environment, and to promote health and safety within the workplace.

This requires Engineering/Geoscience Professionals to incorporate sustainability in their practice because of sustainability's inherent relationship to societal needs, the safety, health and welfare of the public, and the environment. Sustainable professional engineering and geoscience practice, as described in these guidelines, is an important component of these Code of Ethics responsibilities.

Engineering/Geoscience Professionals already have expertise in weighing economic and performance issues, such as cost and safety factors. The application of these guidelines will help Engineering/Geoscience Professionals integrate environmental and social considerations into their practice. While doing so brings many challenges, it also brings opportunities for innovation and broadens their consideration of economic factors to include lower environmental and social impacts. The emerging green and circular economies need people with the technical training and problem-solving skills of engineers and geoscientists.

Engineering/Geoscience Professionals are encouraged to think outside traditional project boundaries and to consider the broader impacts of their designs and projects. They should consider the short- and long-term impacts, as well as direct and indirect impacts of their designs and activities. As we learn more about how our world works – particularly how humans and ecosystems interact – we learn more about what it takes to address the well-being of current and future generations and ecosystems. These ideas steer us away from thinking in terms of “trading-off” human welfare against ecosystem well-being.

Engineering/Geoscience Professionals work across all sectors and, as solutions providers, can influence the options that are considered and decisions that are made. When Engineering/Geoscience Professionals evaluate the available options, they should consider the full life-cycle costs, from project conception to final decommissioning, in order to fully understand the impacts of different alternatives. This includes considering the consequences of not only the proposed action, but also its products and by-products, including their final disposal. Known and

reasonably foreseeable cumulative implications should also be considered. Many of the real costs of projects are commonly externalized and not considered when making a decision on the preferred alternative. It is important to consider the full costs and benefits of any proposed action.

Evaluating potential project designs may require assessing their resiliency or future adaptability to a range of potential future-altered climate patterns. In reviewing a project's full life-cycle costs, Engineering/Geoscience Professionals need to consider measures to mitigate climate change, including but not limited to minimizing GHG emissions, while balancing economic, social and environmental factors.

In recommending specific options, Engineering/Geoscience Professionals should not limit their considerations to only technical issues. Engineering/Geoscience Professionals must clearly identify what aspects of the work they take professional responsibility for and consider adding appropriate qualifiers to statements made about results for sustainable solutions in consideration of their professional liability insurance coverage. For each task, Engineering/Geoscience Professionals should consider other implications that are within their areas of expertise, including, but not limited to, regional, local and community concerns, quality of life and other social concerns related to environmental impact along with Indigenous and cultural considerations where applicable.

2.1.3 PRINCIPLE 3: COLLABORATE WITH PEERS AND EXPERTS WITH DIVERSE BACKGROUNDS FROM CONCEPT TO COMPLETION

2.1.3.1 Principle 3 Summary

At key stages of the project life cycle, Engineering/Geoscience Professionals should collaborate with peers and experts across disciplines and with diverse backgrounds to identify potentially unsustainable outcomes, appropriate alternatives, and new opportunities for sustainable results.

2.1.3.2 Principle 3 Elaboration

The increasing complexity and innovation in providing sustainable solutions means that Engineering/Geoscience Professionals will increasingly work in trans-disciplinary teams with team members having diverse knowledge and skills. To develop knowledge and skills with respect to engaging others, Engineering/Geoscience Professionals should familiarize themselves with engagement frameworks and guidance such as those developed by the International Association of Public Participation (IAP2).

Collaboration should start at the earliest stages, if possible, where opportunities for synergy between project components can more easily and consistently be explored throughout all project phases to increase value and sustainability. Collaboration should also explore opportunities to support reconciliation with Indigenous Peoples in BC, including but not limited to integrating Indigenous ways of knowing into engineering and geoscience work.

2.1.4 PRINCIPLE 4: DEVELOP AND PREPARE CLEAR JUSTIFICATIONS TO IMPLEMENT SUSTAINABLE SOLUTIONS

2.1.4.1 Principle 4 Summary

Engineering/Geoscience Professionals should discuss opportunities and document decisions related to the integration of environmental, social, and economic metrics in their practice. These discussions should occur early enough to enable the client or employer to make informed decisions about how to implement an appropriate level of sustainability considerations in the task or projects, products, processes, or systems.

2.1.4.2 Principle 4 Elaboration

Through their widely varying professional activities, Engineering/Geoscience Professionals are frequently decision-makers or in a position to influence decision-makers. As the advice given by Engineering/Geoscience Professionals can have far-reaching consequences, professionals should explore solutions that promote a broad concept of

sustainability across environmental, social and economic domains.

In the course of an Engineering/Geoscience Professional's work, there are a number of stages where opportunities exist to investigate the social, environmental and economic impacts of potential solutions to a client's problem.

Engineering/Geoscience Professionals should carefully weigh the impacts of alternatives and provide a comparative analysis of their environmental, social and economic impacts.

The purpose of exploring alternatives is to encourage incorporation of processes or options that best promote sustainability. This will have the greatest impact at the conceptual phase, where opportunities to apply sustainability principles can be evaluated and clear justifications can encourage a client or employer to make an informed decision regarding risk-based, whole-life-cycle solutions.

Engineering/Geoscience Professionals are not obliged to assess all concepts, designs and methodologies – only those that are deemed reasonable under the circumstances of the task. In determining what is “reasonable,” Engineering/Geoscience Professionals are expected to exercise professional judgment.

Principle 4 highlights an Engineering/Geoscience Professionals' duty to exercise their professional judgment objectively and consistently. Honest differences of technical opinion among Engineering/Geoscience Professionals are to be anticipated because the matters involve professional judgment which are not always subject to simple analysis. Open discussion of reasonable alternatives between Engineering/Geoscience Professionals is healthy and helpful to decision-makers. Care must be taken to provide independent professional guidance and analysis; the public will be best served if Engineering/Geoscience Professionals maintain objectivity.

With respect to documenting decisions, Engineering/Geoscience Professionals should refer to Bylaws that address quality-management processes for retaining project documentation. More information on retaining project documentation is available in the *Quality Management Guides – Quality*

Management Guide to the Standard for Retention of Project Documentation (Engineers and Geoscientists BC 2021a), available on the Engineers and Geoscientists BC's website.

While Engineering/Geoscience Professionals can present the opportunities and rationale for risk-based, whole-life-cycle solutions, the decision on solutions remains with the client or employer.

2.1.5 PRINCIPLE 5: ASSESS SUSTAINABILITY PERFORMANCE AND IDENTIFY OPPORTUNITIES FOR IMPROVEMENT

2.1.5.1 Principle 5 Summary

Engineering/Geoscience Professionals should identify opportunities to improve knowledge and professional practice related to sustainability, where best practice is to assess the actual performance of implemented solutions against the original design goals and metrics.

2.1.5.2 Principle 5 Elaboration

It is important to confirm that designs are performing to expectations. That knowledge can be gained through qualitative and quantitative data for the benefit of the profession and future advancements. Assessing performance enables Engineering/Geoscience Professionals to identify opportunities for iterative improvements in designs, methods, processes, and technology. This information contributes to the learning process and can be utilized by other Engineering/Geoscience Professionals to identify and enhance future solutions.

The practice of professional engineering and geoscience continually improves due to technological advances, innovation and new design concepts. Engineering/Geoscience Professionals should facilitate improvements and seek to anticipate future needs for sustainability proactively. These improvements should adopt a trans-disciplinary approach, consider risk-based assessments, and

consider cumulative impacts, social values, economic requirements, and environmental aspects. Where possible and reasonable, Engineering/Geoscience Professionals should seek to anticipate the application of sustainability practices by assessing innovative solutions and their use in future applications. This can be accomplished by transferring knowledge gained to others, building capacity in industry, and measuring outcomes and impacts for justifying adoption and mainstreaming of sustainable solutions. As knowledge of sustainability evolves, existing codes, guidelines and standards may need to be updated.

2.2 CONSIDERATION OF RISK

Engineering/Geoscience Professionals have a professional responsibility to uphold the principles outlined in the Code of Ethics, including protection of public safety and the environment. As such, the Engineering/Geoscience Professional must use a documented approach to identify, assess, and mitigate risks that may impact public safety or the environment when providing professional services.

One of the risk factors that must be considered is the implications of climate change.

Engineering/Geoscience Professionals have a responsibility to notify their clients of future climate-related risks, reasonable adaptations to lessen the impact of those risks, and the potential impacts should a client refuse to implement the recommended adaptations. Engineering/Geoscience Professionals are responsible for being aware of and meeting the intent of any climate change requirements imposed by a client or authority having jurisdiction.

Other areas of risk encountered in professional practice include, but are not limited to, quality, technical, financial, and commercial risks.

Engineering/Geoscience Professionals should consider risks in such areas using techniques that are appropriate to their area of practice.

3.0 ROLES AND RESPONSIBILITIES

3.1 ENGINEERING/GEOSCIENCE PROFESSIONALS

Engineering/Geoscience Professionals have a significant role to play in the development of a sustainable society through their professional practice. Their actions directly and indirectly shape the world, including resources used, resilience of infrastructure and systems, as well as the health, safety, environment, and well-being of the public. Engineering/Geoscience Professionals make decisions and provide leadership to colleagues, clients, employers, decision-makers and the public in the development, implementation, operational life spans, and decommissioning of engineering and geoscience projects, products, processes, and systems. Engineering/Geoscience Professionals have a responsibility to inform their employers/ clients about sustainability considerations and the consequences of not incorporating those considerations to allow them to make informed decisions.

The concept of sustainability in the practice of professional engineering and geoscience is not new. Sustainability is already a key element to professional practice where Engineering/Geoscience Professionals carry out their roles considering ethical, environmental, social, and economic challenges. By continually gathering new knowledge, developing new materials and technologies, and using more sophisticated decision-making methods, Engineering/Geoscience Professionals have the ability to deliver economic benefits, minimize negative environmental impacts, and improve societal well-being.

Engineering/Geoscience Professionals already have an explicit mandate to protect public welfare and the environment. The first principle under the Code of Ethics states:

“Registrants must hold paramount the safety, health and welfare of the public, including the protection of the environment and the promotion of health and safety within the workplace.”

Two of the three components of sustainability (social and environmental) are explicitly captured by this first principle of the Code of Ethics. The third component of sustainability (economy) is implicit, because engineers and geoscientists contribute to the essential work of governments and businesses that support and comprise the economy. Incorporating sustainability requires balancing environmental, social and economic interests.

In many cases, regulatory frameworks in BC require Engineering/Geoscience Professionals to make decisions on a case-by-case basis, without prescriptive requirements or additional guidance. In many instances, governments weigh the various societal values through legislation, policies and directives that help inform the determination of appropriate balance of the three pillars of sustainability. In the absence of direction from the government or clients, Engineering/Geoscience Professionals have an important role to play to make sound decisions using a sustainable, long-term lens, rather than to optimize only for the economic aspects in the short term.

Engineering/Geoscience Professionals must consider their work through the “lens of sustainability”, using these *Professional Practice Guidelines - Sustainability* to assist them where appropriate. Specific application of these guidelines is dependent on the context in which the Engineering/Geoscience Professional is practising. Additional resources for sustainable engineering and geoscience practice are also available on the Engineers and Geoscientists BC website. Table 1 below identifies considerations for Engineering/Geoscience Professionals to bring the “lens of sustainability” to their practice.

Table 1. Examples of Sustainability Considerations for Engineering/Geoscience Professionals

ACTION	WHAT THIS LOOKS LIKE FOR ENGINEERING/GEOSCIENCE PROFESSIONALS	EXAMPLES
<p>Maintain a current knowledge of sustainability Develop and maintain current knowledge on a wide range of sustainability topics such as the UN SDGs, circular economy, embodied carbon, biodiversity protection, regenerative design, and social value (including considerations related to equity, diversity and inclusion and reconciliation with Indigenous Peoples). Maintain current knowledge on sustainability related best-practices, tools, legislation, policy, frameworks, standards, targets and metrics as they relate to your industry and areas of practice.</p>	<ul style="list-style-type: none"> Monitoring sustainability issues relative to your area of practice, similar to maintaining knowledge of current local codes and standards, while considering how Indigenous ways of knowing and historic knowledge can improve sustainability. Maintaining ongoing professional development (in alignment with the Engineers and Geoscientists BC Continuing Education Program) in current sustainability practices, such as reducing or eliminating GHG emissions and implementing innovative strategies and methods that adapt systems to extreme weather and the future climate changes. Seeking out education and information to further understand equity, diversity and inclusion concepts, and reconciliation with Indigenous Peoples. Learning about the UN SDGs. 	<ul style="list-style-type: none"> Keeping abreast of industry trends, public policy, research, technology, and best practices to stay current on sustainability related to opportunities and challenges. Participating in communities of practice, reviewing current research, best practices and case studies on innovative solutions and technologies to maintain knowledge and seek appropriate expertise where required. Learning about incorporating Indigenous knowledge into projects and working in diverse teams to understand the knowledge and perspectives found in lived experiences. Understanding how professional practice contributes to achieving SDGs
<p>Integrate sustainability into professional practice Apply a sustainability lens to the short- and long-term impacts, as well as direct and indirect impacts of services provided and products developed. This includes evaluation of options that consider the full, life-cycle impacts and costs, from project conception to completion. As it pertains to integrating sustainability in practice, the focus should be on developing resilient and durable products and solutions as well as minimizing greenhouse gas emissions and resource use, while balancing economic, social and environmental factors.</p>	<ul style="list-style-type: none"> Leading by example by demonstrating what sustainable professional practice looks like. Adopting sustainable practices and maintaining capacity and expertise to advise owners/clients on a range of sustainability topics relevant to the Registrant’s areas of practice. At the outset, discussing options that improve sustainability outcomes in projects with owners/clients and a diverse range of partners including Indigenous Peoples. Considering environmental, social, and economic pillars of sustainability in design, planning, and decision-making. Supporting organizations working to advance sustainability in professional practice. 	<ul style="list-style-type: none"> Articulating sustainable outcomes as they relate to the project and offering means to incorporate these outcomes into the scope of work. Developing sustainability indicators – such as energy and water use, greenhouse gas emissions, embodied carbon, material durability, reuse and recycling – and discussing how these may impact sustainability outcomes on specific projects. Where relevant, adopting integrated project delivery or lean methodologies to increase value, reduce waste, and maximize efficiency through all phases of the project.

ACTION	WHAT THIS LOOKS LIKE FOR ENGINEERING/GEOSCIENCE PROFESSIONALS	EXAMPLES
<p>Collaborate with peers and experts with diverse backgrounds from concept to completion</p>	<ul style="list-style-type: none"> • Collaborating with a network of peers and experts from diverse professional and cultural backgrounds to address knowledge gaps and to identify appropriate alternatives and new opportunities for sustainable results. • Developing and utilizing frameworks for engagement in public projects with the public, key partners, Indigenous Peoples and affected parties to enable open and transparent decision-making for environmental resources allocation and planning for the future. Note: involving affected Indigenous Peoples in the decision-making process as early as possible and considering socio-cultural factors is not only important to advance meaningful reconciliation but is also required in some permitting processes by provincial and/or federal regulators. • Encouraging engagement and collaboration at the onset of a project and consistently following up throughout the phases of the project. • Improving an Engineering/Geoscience Professional's knowledge about preconceived and unconscious biases, organizational behaviour, and power dynamics to support balanced and holistic decision-making. 	<ul style="list-style-type: none"> • Collaborating with experts who may be able to fill knowledge gaps and provide techno-economic (e.g., scenario planning, climate resilience strategies), social (e.g., traditional cultural knowledge, heritage assessment) and trans-disciplinary (e.g., human health, biodiversity protection) viewpoints. • Maintaining public engagement knowledge and using frameworks for public engagement that include input and review from a diverse range of partners including Indigenous Peoples in the design process. • Developing self awareness and relational tools to lead or participate in problem-solving.
<p>Develop and present clear justification to implement sustainable solutions</p>	<ul style="list-style-type: none"> • Demonstrating the business case for selecting more sustainable solutions by discussing the hidden costs of 'business as usual' and the benefits and opportunities for choosing sustainable options. • Promoting the use of sustainability targets or assessment tools to inform briefing, design (starting from the conceptual or early stages), expectations management, performance assessment and remedial interventions in projects. • Continuing to monitor and evaluate the evolving science, technology and policy related to climate change and factoring in socio-economic considerations to justify the implementation of sustainability considerations. 	<ul style="list-style-type: none"> • Identifying the reasonably foreseeable risks to status-quo decision-making, identifying funding opportunities to implement sustainable solutions, and offering to provide a range of options to the owner/client to enable decision-making. • Checking with the owner/client about sustainability objectives as it pertains to the project. Offering the use of sustainability assessment tools and frameworks to tracks sustainability objectives and outcomes. • Considering the evolution of work by local/regional governments, and aligning with relevant policies and regulations (e.g., sustainability commitments, green bylaws, climate adaptation plans, regional growth strategies) in presenting strategies to meet the objectives of the owner/client.

ACTION	WHAT THIS LOOKS LIKE FOR ENGINEERING/GEOSCIENCE PROFESSIONALS	EXAMPLES
<p>Assess sustainability performance and identify opportunities for improvement</p>	<ul style="list-style-type: none"> • Contributing to the improvement of professional practice related to sustainability by identifying opportunities to assess actual performance of implemented solutions against the original design goals and metrics. • Where possible, utilizing qualitative and quantitative means to analyze data to improve or optimize future solutions. • Identifying opportunities for iterative improvements in designs, methods, processes and technology and contributing to the learning process to identify and enhance future solutions. 	<ul style="list-style-type: none"> • Offering owner/client services including commissioning of energy and water systems, monitoring and maintenance, and adaptability to enable the assessment of sustainability performance. • Leveraging the opportunity in public-sector projects or long-term public-private partnership projects to analyze data to identify opportunities for continuous improvement. • Sharing the successes where improvements have been made, and lessons learned from sustainability performance assessments by contributing to the learning process.

3.2 REGISTRANT FIRMS

3.2.1 BYLAWS

Registrant Firms have an obligation as per the Bylaws to develop, maintain, and adhere to a set of policies and procedures known as a Professional Practice Management Plan (a requirement for a Permit to Practice), which must include a Code of Conduct (Bylaw 7.7.3). A Registrant Firm's Code of Conduct must explain how the Registrant Firm will ensure compliance by the Registrant Firm and by all individuals employed by or under contract with the Registrant Firm with:

- each principle of the Code of Ethics;
- ethical business practices addressing corruption, conflict of interest, and contractual matters; and
- any professional practice guidelines that have been approved by Engineers and Geoscientists BC's Board.

The specific code of conduct policies and procedures included in a Registrant Firm's Professional Practice Management Plan must comply with the elements listed above but are otherwise at the discretion of the Registrant Firm.

3.2.2 CODE OF ETHICS

As outlined in Engineers and Geoscientists BC's Guide to the Code of Ethics, government regulations for the protection of the environment must always be followed, regardless of whether the resulting

consequences are undesirable for clients (Principle 3 of the Code of Ethics). Registrant Firms should also access information and resources produced by Engineers and Geoscientists BC to help incorporate environmental considerations into their practices, following guidance where applicable (Principle 4 of the Code of Ethics). These resources include, but are not limited to:

- continuing education sessions;
- practice advisors;
- professional practice guidelines, including these guidelines and the Equity, Diversity and Inclusion Guidelines;
- climate change tools and resources listed in the Climate Change Information Portal; and
- resources and training related to reconciliation with Indigenous Peoples of Canada.

3.2.3 SUSTAINABILITY CONSIDERATIONS FOR REGISTRANT FIRMS

Beyond the requirements outlined in the Bylaws and Code of Ethics, Registrant Firms have an important role in promoting sustainability in the workplace and through professional practice. The sustainability considerations outlined in Table 2 provide further detail on considerations for Registrant Firms to grow and develop their sustainability practices. In some cases, there is an overlap between the examples provided here and those outlined for individual Registrants, which illuminates the relationship between individual and organizational sustainability practices and actions.

Table 2. Examples of Sustainability Considerations for Registrant Firms

ACTION	WHAT THIS COULD LOOK LIKE FOR REGISTRANT FIRMS	EXAMPLES
<p>Maintain a current knowledge of sustainability Develop and maintain current organizational knowledge on a wide range of sustainability topics such as environmental, social and governance (ESG) factors, UN SDGs, circular economy, embodied carbon, biodiversity protection, regenerative design, and social value (including considerations related to equity, diversity and inclusion and reconciliation with Indigenous Peoples). Maintain current knowledge on sustainability-related best practices, tools, legislation, policy, frameworks, standards, targets and metrics as they relate to the firm's industry and areas of practice.</p>	<ul style="list-style-type: none"> • Maintaining a current inventory of best practices, tools, legislation, policy, frameworks, standards, targets and metrics on sustainability informed by science, policy, technology, inter-disciplinary and traditional cultural knowledge, end-users, and other sources. • Offering access to ongoing continuing education to Registrants on sustainability as it pertains to the industries and areas of practice relevant to the firm. • Offering employees basic training on equity, diversity and inclusion, reconciliation with Indigenous Peoples and climate-change awareness. 	<ul style="list-style-type: none"> • Carrying out regularly scheduled environmental scans of industry trends, public policy, research, technology, and best practices to stay current on sustainability related to opportunities and challenges. • Offering ongoing opportunities for knowledge-sharing both within the firm (e.g., staff lunch and learns, mentorship, newsletters) and with practice communities (e.g., conference presentations, participation on technical committees) on sustainability innovations, technologies and approaches to implement in practice. • Developing a sustainability committee within the firm to maintain and disseminate sustainability best practices that extend across disciplinary boundaries and address the wider impacts of the firm's projects and services.
<p>Integrate sustainability into professional practice Apply a sustainability lens to the short- and long-term impacts, as well as direct and indirect impacts of services provided and activities carried out by the firm. This includes evaluation of options that consider the full, life-cycle impacts and costs, from project conception to completion. As it pertains to integrating sustainability in practice, the focus should be developing and maintaining a sustainability strategy as it relates to the firm's industry and areas of practice and delivering on the strategy through in-house capacities, policies and practices.</p>	<ul style="list-style-type: none"> • Leading by example by demonstrating what sustainable professional practice looks like. • Adopting sustainable business practices and maintaining in-house staff capacity and expertise to advise owners/clients on a range of sustainability topics relevant to the firm's areas of practice. • At the outset, discussing options that improve sustainability outcomes in projects with owners/clients and a diverse range of partners including Indigenous Peoples. • Developing an organizational culture with psychological safety to support change by questioning bias and the status quo without penalty. 	<ul style="list-style-type: none"> • Developing a firm-level sustainability strategy and considering its integration into the organization's strategic plan. Adopting sustainability-related metrics and targets and considering appropriate means to report on an annual basis. • Utilizing sustainable employment practices and procurement processes to ensure that they are green (e.g., reducing material use, GHG emissions, water use and pollution), ethical (e.g., precluding corruption, unfair labour practices), and equitable (e.g., preventing systemic discrimination based on favouritism, ageism, sexism, racism). • Developing sustainability indicators such as energy and water use, greenhouse gas emissions, embodied carbon, material durability, reuse and recycling and discussing how these may impact sustainability outcomes on specific projects. Where relevant, adopting integrated project delivery or lean methodologies to increase value, reduce waste, and maximize efficiency through all phases of the project. • Mapping out how firm-wide professional practice aligns with and contributes to achieving SDGs.

ACTION	WHAT THIS COULD LOOK LIKE FOR REGISTRANT FIRMS	EXAMPLES
<p>Collaborate with peers and experts with diverse backgrounds from concept to completion</p>	<ul style="list-style-type: none"> • Leveraging partnerships and collaboration with a range of other organizations, including other businesses, non-governmental organizations, social enterprises, public-sector agencies, and academia to drive sustainability over a broad scale more quickly. • Engaging a network of peers and experts from diverse professional and cultural backgrounds to address knowledge gaps and to identify appropriate alternatives and new opportunities for sustainable results. • Developing and utilizing frameworks for engagement in public projects with the public, key partners, Indigenous Peoples and affected parties to enable open and transparent decision-making for environmental resources allocation and planning for the future. Note: involving affected Indigenous Peoples in the decision-making process as early as possible and considering socio-cultural factors is not only important to advance meaningful reconciliation but is also required in some permitting processes by provincial and/or federal regulators. • Encouraging engagement and collaboration at the onset of a project and consistently following up throughout the phases of the project. Improving the knowledge about preconceived and unconscious biases, organizational behaviour, and power dynamics to support balanced and holistic decision making. 	<ul style="list-style-type: none"> • Partnering and collaborating on joint initiatives to solve sustainability challenges and to mainstream the adoption of innovative solutions, providing input into developing public policy, industry codes and standards to continually improve sustainability outcomes. • Engaging experts who may be able to fill knowledge gaps and provide techno-economic (e.g., scenario planning, climate resilience strategies), social (e.g., traditional cultural knowledge, heritage assessment) and trans-disciplinary (e.g., human health, biodiversity protection) viewpoints. • Providing training for employees on public engagement, discussing the use of frameworks for public engagement to include input and review from a diverse range of partners including Indigenous Peoples in the design process. • Utilizing copyright laws that facilitate rapid knowledge sharing and evolution. • Facilitating industry knowledge sharing groups for collaborative, rapid collective knowledge evolution.
<p>Develop and present clear justification to implement sustainable solutions</p>	<ul style="list-style-type: none"> • Demonstrating the business case for selecting more sustainable solutions by discussing the hidden costs of ‘business as usual’ and the benefits and opportunities for choosing sustainable options. • Promoting the use of sustainability targets or assessment tools to inform briefing, design (starting from the conceptual or early stages), expectations management, performance assessment and remedial interventions in projects. 	<ul style="list-style-type: none"> • Identifying the reasonably foreseeable risks to status-quo decision-making, identifying funding opportunities to implement sustainable solutions, and offering to provide a range of options to the owner/client to enable decision-making. • Checking with the owner/client about sustainability objectives as it pertains to the project. Offering the use of sustainability assessment tools and frameworks to tracks sustainability objectives and outcomes.

ACTION	WHAT THIS COULD LOOK LIKE FOR REGISTRANT FIRMS	EXAMPLES
	<ul style="list-style-type: none"> Continuing to monitor and evaluate the evolving science, technology and policy related to climate change and factoring in socio-economic considerations to justify the implementation of sustainability considerations. 	<ul style="list-style-type: none"> Considering the evolution of work by local/regional governments, and aligning with relevant policies and regulations (e.g., sustainability commitments, green bylaws, climate adaptation plans, regional growth strategies) in presenting strategies to meet the objectives of the owner/client.
<p>Assess sustainability performance and identify opportunities for improvement</p>	<ul style="list-style-type: none"> Improving professional practice related to sustainability by identifying opportunities to assess actual performance of implemented solutions against the original design goals and metrics. Where possible, utilizing qualitative and quantitative means to analyze data to improve or optimize future solutions. Identifying opportunities for iterative improvements in designs, methods, processes and technology, and contributing to the learning process to identify and enhance future solutions. 	<ul style="list-style-type: none"> Offering owner/client services, including commissioning of energy and water systems, monitoring and maintenance, adaptability to enable the assessment of sustainability performance. Leveraging the opportunity in public-sector projects or long-term public-private partnership projects to analyze data to identify opportunities for continuous improvement. Sharing the successes where improvements have been made, and lessons learned from sustainability performance assessments by contributing to the learning process.

4.0 REFERENCES AND RELATED DOCUMENTS

4.1 LEGISLATION

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Professional Governance Act [SBC 2018], Chapter 47.

4.2 REFERENCES

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5.0 APPENDIX

APPENDIX A: ENGINEERS AND GEOSCIENTISTS BC SUSTAINABILITY INITIATIVES

Engineers and Geoscientists BC supports several sustainability initiatives, including:

- Climate Change Position Statements: Engineers and Geoscientists BC has two Board-endorsed position statements on climate change (2016). These convey the unequivocal acceptance on the part of Engineers and Geoscientists BC of the strong evidence that human activities, in particular activities that emit GHGs, are contributing to global climate change. These position statements commit the regulatory body to raising awareness about the realized and/or potential impacts of the changing climate and outline responsibilities for Registrants to consider climate change in their practice. The responsibilities are as follows:
 - Registrants are expected to keep themselves informed about the changing climate and consider potential impacts on their professional activities; and,
 - Registrants have the potential to influence greenhouse gas emissions through their professional activities and are expected to consider the impact of their work on the climate.
- Climate Change Action Plan: Engineers and Geoscientists BC has a Climate Change Action Plan (2021) that provides a proactive and methodical approach to supporting Registrants with tools and information they need to address climate change in their work and to collaborate with others to ensure meaningful progress is made.
- Getting to 30 by 30: Adopted by Engineers Canada in 2014, 30 by 30 is a national initiative to increase the number of female-identifying Registrants to 30 percent by the year 2030.

Engineers and Geoscientists BC has been working on a number of initiatives to support diversity in the profession, making participation in this initiative a logical imperative (See the Engineers and Geoscientists BC 30-by-30 Strategy and Guide to Action for more information).

- Equity, Diversity, and Inclusion: Engineers and Geoscientists BC recognizes the importance and value of social equity, diversity and inclusion within the organization and within the professions of engineering and geoscience as part of its regulatory mandate. To guide professional practice related to equitable, diverse, and inclusive environments and interaction, Engineers and Geoscientists BC developed the *Professional Practice Guidelines – Equity, Diversity, and Inclusion*. These guidelines were first published in 2016 under the title *Human Rights and Diversity Practice Guidelines* and have since been updated to reflect the new requirements of the *Act*, and recent societal shifts in awareness and understanding of these issues.
- Reconciliation with Indigenous Peoples: In keeping with the principles of equity, diversity and inclusion, Engineers and Geoscientists BC is committed to supporting reconciliation with Indigenous Peoples and recognizes the lands on which BC were founded. Engineers and Geoscientists BC acknowledges the need to address systemic issues of inequity and is committed to building an inclusive environment within the organization, across all committees and advisory groups, and for Registrants and Registrant Firms that promotes equity and diversity within the professions of engineering and geoscience, and respect and incorporate different ways of knowing.

