COLLEGE OF
APPLIED BIOLOGY

SCOPE OF PRACTICE FRAMEWORK DISCUSSION PAPER

1. Preamble

The *Professional Governance Act (2018)* (*PGA*) when fully enacted will require applied biology professionals in BC to be registrants of the College of Applied Biology and present the opportunity to be licensed (Right to Practice) under the College of Applied Biology Regulation. In order to implement these changes effectively, the College is further defining the Scope of Practice for applied biology professionals.

Applied biology professionals have diverse areas of practice (zoology, botany, microbiology, biochemistry and ecology), that evolve over time throughout the course of their career and can overlap with other natural resource (NR) professionals' scope of practice. As such, defining the Scope of Practice for applied biology professionals that covers a wide range of practices, expertise and levels of competency requires thoughtful consideration, broad meaningful engagement and ultimately an overarching policy.

The purpose of defining the Scope of Practice for applied biology professionals is to ensure the variety and complexity of what applied biology professionals do -- scope of practice -- is encompassed and described while ensuring the public's interest is protected.

Regulated professionals are regarded by the public, clients and other professionals as having enhanced accountability. They are bound to a Code of Ethics that sets expectations for behavior and professionalism. Government trusts them to protect the public's interest over their own: they have entered into an agreement with government, via the regulatory body (the College of Applied Biology), to legally regulate their activities. As such, defining Scope of Practice for College members will result in improving and preserving a high level of professional accountability.

2. Guiding Principles

The guiding principles for the Scope of Practice framework development are multi-faceted. However, the primary principles are to ensure the framework protects the public's interest and is developed in a fair and transparent manner. In order to be successful further principles were essential to ensure a fair and transparent framework was developed. These include:

- working collaboratively with other NR regulators and the government of BC
- inclusive consultation with College members, other NR associations and regulators and non-regulated NR practitioners
- recognizing and supporting existing practice rights and titles of other professions and associated regulators
- being open to and incorporating innovative ideas and solutions along with traditional ideas and solutions
- ensuring appropriate solutions are found, proposed and implemented at the right governance level; this includes but is not limited to regulation, Bylaws (Rules), policy and guidance

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3. **Discussion**

The College established a Scope of Practice Task Force and engaged registrants, non-regulated applied biology practitioners and other natural resource associations to provide input and considerations to appropriately define scope of practice for applied biology professionals (Appendix A). The overall intent of the process was to:

1) provide advice to government for regulating Right to Practice for applied biology professionals
2) provide guidance to members
3) inform the public on practice scope for applied biology professionals using inputs from consultation

The scope of the Task Force and engagement/consultation feedback was to develop an operational statement that encompasses the activities of applied biology professionals, to define Scope of Practice for applied biology professionals and to identify ancillary materials such as guidance documents that the College may need to develop.

As the College of Applied Biology Regulation is being developed, the primary focus for the College is to ensure a sound definition of scope of practice. As the Regulation moves to approval, the College will develop and approve associated rules/by-laws and policies that define scope of practice in more detail and set out processes to ensure consistency with the PGA and regulations.

The College will also develop policy, guidance and guidance documents for registered applied biology practitioners in areas specific to applied biology professionals' scope of practice. In areas of practice overlap with other NR professionals the College will continue to work at the staff level to resolve areas of overlapping practice. It is also expected the College will participate in joint

Concurrent Initiatives

Although the credentialing of new College registrants, regulation of firms and regulatory provisions were outside the Scope of the Scope of Practice framework, there are links. Once the *PGA* is fully enacted, anticipated to be fall 2020, it will require applied biology professionals in B.C. to be registrants of the College and potentially to be licensed (Right to Practice) under the College of Applied Biology Regulations. As such the College will be required to have options for current non-registered applied biology practitioners to become registered, regulate firms (ranging possibly from sole practitioners to large firms) and enforce regulatory provisions.

Credentialing

The College Credentials Task Force has reviewed various credentialing options to allow current non-registered applied biology practitioners to meet the College's entrance requirements (i.e. academic, work experience and report writing – where required) and become a member once the *PGA* is fully enacted. These options are practicable and take into consideration practitioners who range in both work experience and various academic streams. Academic options for degrees and technical diplomas and on the job training/work experience are varied and have changed since the College was established. These options will continue to evolve to meet the public, government and industry requirements. Consequently, the College needs to reflect changes in the Scope of Practice and be forward thinking to encompass current and future non-registrants and college and university applied biology program graduates from both BC and outside the province.

Regulation of Firms

Currently Engineers and Geoscientists of BC is leading the efforts on firm regulation. The College will work jointly with them, other regulators and government to develop a process and framework for regulation of firms that will encompass the requirements of the College. This joint work is of particular importance as many firms (small and large) employ multiple NR professionals and requires the process to be inclusive of the various professions and their associated self-regulators.

boards to work collaboratively on guidance documents for all NR practitioners to use. These documents will follow a similar deliverable as the Legislated Riparian Assessments in BC professional practice guidelines that were jointly developed by the College, the Engineers and Geoscientists of BC and the Association of BC Forest Professionals.

4. **Key Points**

1: Applied Biology Operational Statement

It is recommended that the College adopt the following applied biology operational statement developed to define what applied biology professionals do through the consultation process and work completed by the Scope of Practice Task Force (Appendix A).

> **"*The practice of professional applied biology is the provision of science-based advice and services in relation to the long-term sustainability of aquatic and terrestrial ecosystems, their living organisms, habitats, and processes*."**

Results of the College's engagement workshops, held across the province, highlighted that there is a need for natural resource (NR) professionals, not limited to applied biology professionals, to be competent and held accountable for both their competency(ies) and levels of competency they declare. Moreover, these competency(ies) need to be clearly identified and defined. Consultation feedback also indicated that the lines between professional areas of practice amongst NR professionals are not always clear; there is overlap and currently a large number of NR professionals are working and collaborating together successfully. For successful implementation of the *Professional Governance Act* (*PGA*) and Right-to-Practice (RTP) for College members moving forward, the following key factors are essential:

1) that NR professionals work within their scope of practice, and level of competency(ies)
2) current avenues for collaboration between NR professionals remain in place and are able to evolve with time and
3) NR professionals, clients/proponents and regulators understand the greater the risk to the public's interest (e.g. an ecosystem and/or its associated biological resources) the more critical it is to have the appropriate competent professional(s) conducting the work and/or providing advice

The College will continue to work with members, partners, regulators and non-regulators on Scope of Practice as it evolves over time.

As a fundamental principle of professional reliance, all applied biology professionals must work within their own area(s) of practice and associated level(s) of competency. A competency(ies) is more comprehensive than skill set(s) alone. A professional's knowledge, skills and abilities in an area and/or subject determine their level of competency (competent, proficient and expert). Members will self-declare their scope of practice and competency(ies) levels to the College.

2: Scope of Practice framework competency framework

Scope of Practice for applied biology professionals will be based on a "competency framework" in which any work undertaken must not exceed each professional's level of competency as acquired through education, training and years of experience.

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It is recommended that the following proposed Scope of Practice framework competency framework (Figure 1.0, left) be adopted. A competency framework is a model that broadly describes performance quality with an organization or sector. Frameworks commonly consist of a number of competencies, which can be applied to a broad number of roles within the organization or sector. Competencies are observable performances that can be measured and evaluated and are therefore essential in terms of defining requirements of applied biology professionals. In addition, competencies allow for professional mobility, changes and evolution. Competency frameworks are standard across many professions and sectors including but not limited to medical, legal, financial, actuary, human resource and education professions and government, energy and food and beverage in sectors in Canada and across the globe.

A competency continuum (Figure 1.0, right) for applied biology professionals was developed through the Scope of Practice engagement process and is based on other professions' competency continuums such as physicians and lawyers. Competency levels, (competent, proficient and expert) depend on an individual professional's training and experience in a specific area/subject matter which has been and will continue to be acquired through education, training, knowledge, skills, abilities and continuing professional development including but not limited to knowledge; field, policy and management experience; and working with a/under a subject matter expert. Levels of competency(ies) are linked to the competency framework.

Consultation feedback has indicated that there is overlap between professional areas of practice amongst NR professionals who are working and collaborating together successfully.

Therefore, while it is critical to identify exclusive areas of practice where there is a high risk, it is more important to describe the skills, capabilities and knowledge needed to perform specific types and areas of practice.

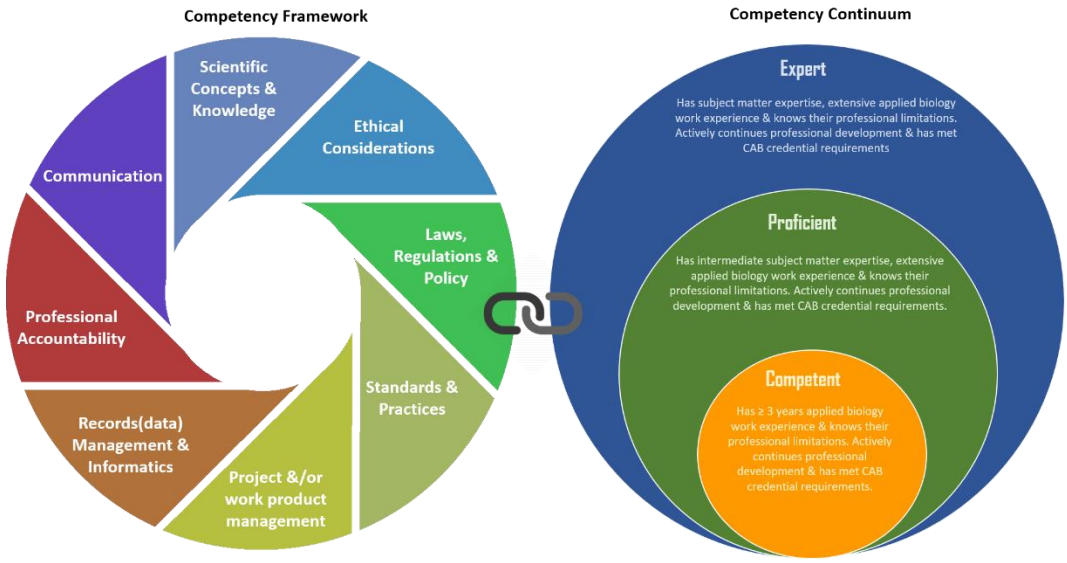

Figure 1.0 Proposed Scope of Practice Competency Framework and Competency Continuum for Applied Biology Professionals

Noted -. Registrants are accountable and responsible for competency(ies), associated levels and scope of practice that they self-declare.

The proposed Scope of Practice framework and competency continuum will enable the College to successfully align its members' skills, capabilities and knowledge with their professional scope of practice. The purpose of using the competency framework and competency continuum enables the College as a regulator and members to have clear expectations and an understanding of what is required and expected as an applied biology professional, thereby providing a reliable and high-standard profession in which the public can have trust.

5. **Resources**

College of Applied Biology Act

Professional Governance Act

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Appendix A: Scope of Practice Consultation and Engagement

With the full enactment of a *Professional Governance Act* (2018) (*PGA*) anticipated, the College has set out to define Scope of Practice while ensuring the creation of a transparent, smooth and fair path to Right to Practice for applied biology professionals in BC. In order to accomplish this the College created a Scope of Practice Task Force and held a series of Scope of Practice workshops in Prince George, Nanaimo, Vancouver and Kelowna and presented a province-wide webinar. Engagement was initiated to foster collaboration with other regulated and non-regulated natural resource (NR) professionals and to ensure applied biology scopes of practice and Right to Practice, if granted, do not negatively impact applied biology professionals, other natural resource professionals or the public, all of whom will be influenced by the enforcement of the *PGA*.

The workshop series were held to provide College registrants, non-registrant applied biology practitioners, other natural resource management practitioners and the public the opportunity to explore some of the following topics:

- The *Professional Governance Act* and its implications to natural resource practitioners
- Defining scope of practice, especially how the individual's scope may evolve, where its limitations may necessitate input from another professional and guidelines for competency
- Working with other natural resource professionals, including areas of overlap
- The transition to potential Right to Practice (RTP) for applied biology professionals

The College of Applied Biology Scope of Practice Consultations Summary Report details the common ideas and some verbatim feedback from the workshop series. The report is available on the College's website. One hundred and eighty-three professionals and members of the public (other) attended the workshops (Figure 2.0). Professionals included College members (Registered Professional Biologists, Registered Biology Technologists and Biologists in Training), members of the Association of BC Forest Professionals (Registered Professional Foresters and Registered Forestry Technologists), Professional Engineers (members of the Engineer and Geoscientists of BC), members of the BC Institute of Agrologists (Professional Agrologists and Articling Agrologists) and Applied Science Technologists and Technicians of BC members.

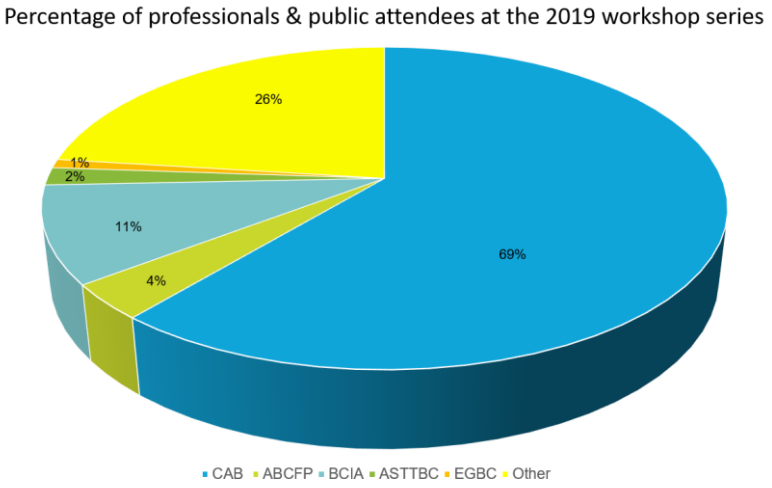

Figure 2.0 Attendance at College of Applied Biology's Scope of Practice workshop series, including four in-person sessions and one webinar

Feedback received from the events was positive. Results showed currently NR professionals are collaborating and engaging experts when required. The ability to continue to do so is important for NR professionals and to ensure the public's interest is protected. Overall engagement feedback provided affirmation that the College's way forward is supported by members, other NR professionals and the public. The results were used to define applied biology professionals Scope of Practice and develop the College's Scope of Practice framework to ensure CAB's compliance with the *PGA*.

Appendix B: Defining the Practice of Professional Applied Biology (Draft)

The proposed applied biology operational statement.

> "*The practice of professional applied biology is the provision of science-based advice and services in relation to the long-term sustainability of aquatic and terrestrial ecosystems, their living organisms, habitats, and processes*."

What Applied Biology Professionals do (Scope of Practice):

Applied biology professionals (ABPs) work in five (5) broad fields of biology; zoology, botany, microbiology, ecology and biochemistry. ABPs work with and around complex ecosystems with new and evolving science, information and technology. As such practice implementations emerge and evolve. They provide advice and services to a wide diversity of sectors including but not limited to the public, government, forestry, mining, energy, agriculture, science, non-profit, construction, consulting, research and academia, having the roles and responsibilities to:

- Collect, inventory and monitor biological data and resources
- Classify, analyze and manage biological data and resources
- Plan, design and manage biological projects, assessments and studies
- Develop and advise on science-based legislation, policies and guidance
- Apply science-based legislation, policies, standards and guidance
- Provide solutions and recommendations for restoration, remediation and mitigation
- Deliver biological education, outreach and awareness
- Collaborate on biological matters with other natural resource and non-natural resource professionals.

Defining the practice of professional applied biology

EXAMPLE DEFINITION: the following definition of the practice of professional applied biology was based on several other practicing professions such as the medical and forestry fields that currently have registration, certification and Right to Practice (licensure).

"**practice of professional applied biology**" means, for fees, or other remuneration, pro bono or volunteer work, advising on, performing or directing works, services or undertakings which, because of their scope and implications respecting applied biological science, require the specialized education, knowledge, training and experience of a registered member while recognizing public and indigenous values related to biological resources and aquatic and terrestrial ecosystems includes the following:

a. advising on, planning, directing, assessing, managing, collaborating, educating and approving methods for conservation, protection, management, enhancement, rehabilitation, remediation, and mitigation and engaging in and reporting on aquatic and terrestrial ecosystems or the biological resources within these ecosystems;
b. carrying out activities (biological projects, assessments and studies) related to aquatic and terrestrial ecosystems or the biological resources within these ecosystems to:
    i. collect, inventory and/or monitor biological data and resources;
    ii. classify, analyze and manage biological data and resources;
    iii. advise, recommend or direct restoration, remediation or mitigation action as required to conserve, protect, manage, rehabilitate or enhance aquatic and terrestrial ecosystems or the biological resources within these ecosystems; and/or
    iv. verify that activities have been carried out as advised, planned, directed or recommended
c. evaluating, examining and verifying the results of activities involving the practice of professional applied biology, and the attainment of goals and objectives identified in or under professional documents;
d. the preparation, review, amendment and approval of professional documents;
e. planning, locating and approving activities in aquatic and terrestrial ecosystems or on the biological resources within these ecosystems;
f. assessing, estimating and analyzing the functions, capacity and capability of biological resources within these ecosystems.

Appendix C

Table C1. Status of regulated Applied Biology Professionals currently and in the future.

	Applied Biology Practitioners (ABPs)	Title/Designation	Regulation	The Purpose of Self-regulation
Currently	ABPs voluntarily apply to be registered & certified with the College via the *College of Applied Biology Act* (CABA).	College members have rights to titles/designation for which they qualify (RPBio, RBTech, ABT, BIT, RBTech In Training & ABT In Training).	CAB members are regulated by CAB via the CABA.	To legally protect the public's interest by regulating the practice of registered ABPs.
	ABPs are not registered & certified with the College.	Non-members do not have right to use the RPBio, RBTech, ABT, BIT, RBTech In Training & ABT In Training titles.	Non-members are not regulated by the College.	Public does not have a self-regulating body to protect their interests. Any applied biology professional can practice applied biology.
Future	ABPs will be required to be registered & certified under the *Professional Governance Act* (PGA). ABPs also have opportunity of licensure (Right to Practice) under the PGA as well.	Registrants (members) have rights to titles/designation for which they qualify (RPBio, RBTech, ABT, BIT, RBTech In Training & ABT In Training). Applied Biology practitioners may not use titles such as Professional Biologist unless registered & certified with the College. As well they may also be not be eligible for licensure (Right to Practice).	Registrants will be required to be regulated under the *PGA* & *College of Applied Biology Regulations*. Registrants may have Right-to-Practice (licensure) under the *PGA* & *College of Applied Biology Regulations*.	To legally protect & promote the public's interest by regulating the practice of ABPs.

Appendix D

Table D1. Compliance continuum (larger reproduction).