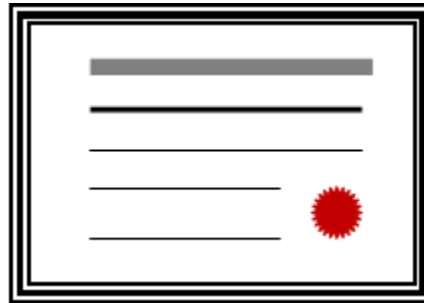


Measures in Place to Support the Competency and Accountability  
of Qualified Persons Working in the Natural Resource Sector



Qualified Persons Cross-Ministry Working Group  
British Columbia Natural Resource Sector Agencies

November 2014

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## Introduction

This inventory was prepared by the Qualified Persons Cross-Ministry Working Group (QP working group) to support its purpose of promoting better utilization of qualified persons in the natural resource sector. In consultation with industry, professional associations, staff and other stakeholders, the QP working group concluded that competency, accountability, and guidance of qualified persons (QPs) are essential components of a framework for the effective use of qualified persons. This inventory describes the measures that have been put in place by QP governing bodies to support competency and accountability. Some information is provided on guidance as well, though may not reflect the full extent of guidance in place for each qualified person.

**Table 1a: Certification and Competency Measures**

QP Type by Discipline / Activity	Governing body membership requirement (to maintain standing as a QP)	Education requirement for membership (describe)	Entrance exam requirement for membership (describe)	Specialty competency requirements included (general description of how specialties are recognized in certification if at all)
<b>Registered Professional Forester</b>	Must be part of ABCFP	Bachelors degree (science based)	RPF exam Mandatory Ethics Course	Core competency standards are met through studies towards that science-based degree Disciplines of practice identified with registration
<b>Registered Forest Technologist</b>	Must be a part of ABCFP	2 year forest technology diploma from an institute recognised by the ABCFP	Must write and pass part A and part B of RFT registration exam  Mandatory Ethics Course	Disciplines of practice identified with registration
<b>Professional Engineers</b>	Yes	Undergraduate degree in an engineering program accredited by the Canadian Engineering Accreditation Board	Successful completion of professional practice examination , law and ethics training and English competency	Specific Specialist designations can be authorized by Bylaw (including education /years of experience) Also skills and competencies recommended for carrying out particular professional activities are provided in Professional Practice Guidelines approved by the APEGBC Council which administers the E&G Act

<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>Professional Geoscientists</b>	Yes	Undergraduate degree in geoscience from a university approved by the APEGBC Council (must meet syllabus requirements)	Successful completion of professional practice examination, law and ethics training and English competency	Specific Specialist designations can be authorized by Bylaw (including education /years of experience) Also skills and competencies recommended for carrying out particular professional activities are provided in Professional Practice Guidelines approved by the APEGBC Council which administers the E&G Act
<b>Professional Biologist</b>	Must be a member of College of Applied Biology	Bachelor degree with specific course competencies	Completion of a course in professional ethics	Competency demonstrated through biology/science degree, work experience and a professional report
<b>Registered Biologist Technologist</b>	Must be a member of College of Applied Biology	2 year diploma or competency demonstration as per requirements	Completion of a course in professional ethics	Competency demonstrated through diploma or courses, work experience and a data report
<b>Professional Agrologist</b>	Must be registered with BCIA	4 year bachelors degree including 15 courses in natural sciences, 11 courses at the 300 or 400 level of which 8 must be natural sciences		Must take part in articling agrologist program and take part in events and activities Must meet milestones before achieving P. Ag status

<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>Applied Science Technologist</b>	Must be registered with ASTTBC	Diploma (BCIT, College or University accredited Technology program)	Professional Practice and Ethics Exam plus completion of Professionalism Workbook	National accreditation for BC / Canadian programs and competency-based assessment against National Technology Benchmarks using Technology Registrations Canada software
<b>Certified Technician</b>	Must be registered with ASTTBC	Diploma (BCIT, College or University accredited Technology program)	Professional Practice and Ethics Exam plus completion of Professionalism Workbook	National accreditation for BC / Canadian programs and competency-based assessment against National Technology Benchmarks using Technology Registrations Canada software
<b>Registered Onsite Wastewater Practitioner (ROWP)</b>	Yes. Under Sewerage System Regulation a practitioner must either be registered with ASTTBC as ROWP or as a 'professional'	Completion of accredited training program	Jurisprudence examination	Review of ROWP work practices is required
<b>Registered in Site Improvements Surveying (RSIS)</b>	Exemption in Land Surveyors Act and agreement between ABCLS and ASTTBC defines scope of practice	Must first be an ASCT or CTech PLUS have requisite competencies in site improvements surveying	Jurisprudence examination	Must be competent in site improvements surveying

<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>BC Land Surveyor</b>	Yes, Association of BC Land Surveyors	Certificate of completion, proof of grad from a university or 2 year geomatics program from a technical institute	Yes - Certified board of examiners for professional surveyors will determine what exams are necessary and completion of Professional Assessment Interview	No limited licensing
<b>Professional Archaeologist</b>	Not required to practice	In order to obtain student membership, must be currently enrolled in a degree-granting institute in a course program leading to a degree in archaeology	No entrance exam Membership approval overseen by membership committee which provides a peer review of applicants technical qualifications and experience	Must meet competency requirements (education and days of experience) out lined by province and membership guidelines
<b>Professional Chemist</b>	Association of The Chemical Profession of BC	BSc in Chemistry	No entrance exam	
<b>Contaminated Sites Approved Professional</b>	Yes, CSAP society	Must be a professional member of one of the following APEGBC, BCIA, CAB, ACPBC	Applicants must pass 2 part exam	There are two certification options; Numerical Standards Approved Professional, and Risk Assessment Approved Professional In order to qualify in for designation in either area the candidate must pass a regulatory exam and area of practice exam
<b>Licensed Scaler</b>	Yes, MFLNRO	Practical and written exam	No	Must be able to scale for the interior, coast or both

<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>Silviculture Accredited Surveyor</b>	ABCFP Associate Member is voluntary SAS designation	Knowledge and skills required are one of the following: <ul style="list-style-type: none"> <li>• formal education (college, university, SIBC)</li> <li>• informal on-the-job training</li> <li>• on-the-job experience (some will be necessary)</li> <li>• short courses (offered through various educational facilities)</li> </ul>	Successful completion of an accreditation examination	Field experience requirement
<b>Pesticide Applicator</b>	Ministry Of Environment has list of certified Applicators	None	Yes Provincial Exam (Ministry of Environment)	None
<b>Pesticide Dispenser</b>	Ministry Of Environment has list of certified Dispensers Adjudicated by Ministry Of Environment	None	Yes Provincial Exam (Ministry of Environment)	None
<b>Accredited Timber Cruiser</b>	ABCFP Associate Member ATC designation	Training and experience following the Timber Cruisers Log Book	ATC Technical Exam  An ABCFP ethics exam	Accredited for the interior, coast

QP Type by Discipline / Activity	Governing body membership requirement (to maintain standing as a QP)	Education requirement for membership (describe)	Entrance exam requirement for membership (describe)	Specialty competency requirements included (general description of how specialties are recognized in certification if at all)
<b>Accredited Timber Evaluator</b>	ABCFP Associate Member ATE designation	A minimum of five years' experience and competencies and are responsible for organizing, training, quality assurance and reporting of results	ATE Technical Exam  An ABCFP ethics exam	Accredited for the interior, coast
<b>Qualified Well Pump Installer</b>	Registered by Ministry of Environment	None	A certificate as a Ground Water Drilling Technician issued by the Canadian Ground Water Association Must achieve 70% or higher on the exam	
<b>Qualified Well Driller</b>	Registered by Ministry of Environment	None	<ol style="list-style-type: none"> <li>1. A certificate as a Water Well Driller issued by the Province of British Columbia (Must achieve 70% or higher on the exam)</li> <li>2. An equivalent certificate issued by another province or territory of Canada</li> <li>3. A certificate as a Ground Water Drilling Technician issued by the Canadian Ground Water Association</li> </ol>	



<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>Environmental Professional</b>	No	Completion of 2-3 year diploma program or 3-4 year university degree program from recognized Canadian schools (or equivalent from foreign institution)	Depends on certification, EP, EPt and EPt(GHG) no, for EP(CEA) EP(EMSLA) P.Met and EP(GHG) there is an exam that must be passed	EPt, EP, and P. Met applicants must successfully complete a self-assessment and peer validation process where their skills and knowledge are compared to the NOS – National Occupational Standards for Environmental Employment, based on the area of specialization/practice they apply in
<b>Blasting - open pit &amp; u/ground</b>		A blasters certificate issued by MEM	Yes	
<b>Shift Boss - open pit &amp; U/ground</b>		Shift boss certificate issued by MEM	Yes	Valid first aid certificate Knowledge of mine rescue, blasting and the mine act/code Conversant in English
<b>Mine Rescue - open pit &amp; u/ground</b>		Physically fit, mine rescue certificate issued by MEM	One week course and exam by MEM	Must complete 8 hours practice every 3 months Must hold current first aid certificate
<b>Coal Blasting Certificate</b>		Blasters certificate issued by MEM	Yes	
<b>1st Class and 2nd Class U/ground Coal Certificate</b>		Coal certificate issued by MEM	Same as shift boss	Same as shift boss

<b>QP Type by Discipline / Activity</b>	<b>Governing body membership requirement (to maintain standing as a QP)</b>	<b>Education requirement for membership (describe)</b>	<b>Entrance exam requirement for membership (describe)</b>	<b>Specialty competency requirements included (general description of how specialties are recognized in certification if at all)</b>
<b>Burn Boss certificate</b>	Must be employees of a government agency such as the B.C. Wildfire Management Branch or another formally recognized jurisdiction	Completion of certification training		Must be fully capable of demonstrating fire behaviour knowledge, fire management tactics, fire line equipment use, fire line organization, communications, air operations, and orienteering Must be physically fit
<b>Recognized Environmental Farm Planner</b>	If working on programs for BC Ministry of Agriculture or our 3rd party delivery agent – must be approved	Completion of training		Must complete at least one reviewed environmental farm plan after training to be recognized

**Table 1b: Certification and Competency Measures**

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
<b>Registered Professional Forester</b>	No experience necessary at time of application After enrollment must complete 24 months of acceptable post-enrollment work experience under guidance and supervision of sponsor	To keep informed in the member's field of practice and to be aware of current issues and developments in forestry Mandatory annual competency assessment and professional development plan	Voluntary certification for specialties
<b>Registered Forest Technologist</b>	No experience necessary at time of application After enrollment must complete 24 months of acceptable post-enrollment work experience under guidance and supervision of sponsor	To keep informed in the member's field of practice and to be aware of current issues and developments in forestry Mandatory annual competency assessment and professional development plan	Voluntary certification for specialties
<b>Professional Engineers</b>	4 years of relevant engineering experience to meet competency requirements	Required by APEGBC bylaws that members maintain currency	
<b>Professional Geoscientists</b>	4 years of relevant geoscience experience to meet competency requirements	Required by APEGBC bylaws that members maintain currency	
<b>Professional Biologist</b>	3 years	Complete declaration each year to confirm Continuing Professional Development	
<b>Registered Biology Technologist</b>	2 years	Complete declaration each year to confirm Continuing Professional Development	

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
<b>Professional Agrologist</b>	2 years	Min 30 hours of professional development a year, and 125 personal development hours over 3 years, to be recorded on an annual personal log on the BCIA members only site	
<b>Applied Science Technologist</b>	Now based on a competency assessment as a result of Ontario Human Rights Commission decision Past experience was a minimum of 2 years, with an average of 3.5 years	Required by code of ethics to maintain competency As of March 2014 ASTTBC policy is that members must report CPD (Continuing Professional Development) Auditing of this policy will roll out over five years, i.e. 2015 - 2020	Mandatory reporting of CPD and auditing could lead to loss of certification and registration
<b>Certified Technician</b>	Now based on a competency assessment as a result of Ontario Human Rights Commission decision Past experience was a minimum of 2 years, with an average of 3.5 years	Required by code of ethics to maintain competency As of March 2014 ASTTBC policy is that members must report CPD (Continuing Professional Development) Auditing of this policy will roll out over five years, i.e. 2015 - 2020	Mandatory reporting of CPD and auditing could lead to loss of certification and registration
<b>Registered Onsite Wastewater Practitioner (ROWP)</b>	Demonstrated competency Experience is reviewed as one element of application process	Required by code of ethics to maintain competency As of March 2014 ASTTBC policy is that members must report CPD (Continuing Professional Development) Auditing of this policy will roll out over five years, i.e. 2015 - 2020	Mandatory reporting of CPD and auditing could lead to loss of certification and registration

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
<b>Registered in Site Improvements Surveying (RSIS)</b>	Minimum ASCT or CTech plus competency in site improvement surveying	Required by code of ethics to maintain competency As of March 2014 ASTTBC policy is that members must report CPD (Continuing Professional Development) Auditing of this policy will roll out over five years, ie 2015 - 2020	Mandatory reporting of CPD and auditing could lead to loss of certification and registration
<b>BC Land Surveyor</b>	Minimum 2 years cadastral surveying experience under articles	Continuing Professional Development Includes voluntary mentoring and self-assessment components	Annual renewal required to practice – including insurance
<b>Professional Archaeologist</b>	Professional member 3 years, associate member 360 working days, intern and affiliate members 240 working days, student must provide copy of student card	Members of the society have a responsibility to contribute to the advancement of archaeology, by developing professional knowledge and skills, and by sharing this information and skills	BCAPA does not require,
<b>Professional Chemist</b>	4 years for Professional Chemist registration Chemist-in Training must be employed in a chemistry position but can have less than 4 years chemistry experience	Annual Requirement for reregistration Minimum 499 practice hours and 50 ProD credits by submitted report	Annual Requirement for reregistration Minimum 499 practice hours and 50 ProD credits by submitted report
<b>Contaminated Sites Approved Professional</b>	10 years relevant documented experience and direct documented experience (DDE), minimum of 8 must be DDE, 4 of which must be at a decision making level	Must complete 150 PD hours over each 3 year period, minimum of 30 per year An Approved professional must also submit at least one application for a ministry	Should an AP fail to meet or maintain requirements of membership, they will be required to pass entrance exams in order to retain membership

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
		instrument within each three year period and maintain \$2 million in Professional and General Commercial Liability coverage	
<b>Licensed Scaler</b>	Needs to pass exams		No
<b>Silviculture Accredited Surveyor</b>	Surveyors interested in taking the exam (with MFLNRO) should have a minimum of one field season performing stocking and free growing surveys	Must complete an annual self-assessment of competency and produce a personal professional development plan	N/A
<b>Pesticide Applicator</b>	None	After 5 years must re-certify by professional development credits, or written exam	After 5 years must re-certify by professional development credits, or written exam
<b>Pesticide Dispenser</b>	None	After 5 years must re-certify by professional development credits, or written exam	After 5 years must re-certify by professional development credits, or written exam
<b>Accredited Timber Cruiser</b>	Minimum of two years field experience and competencies	Must complete an annual self-assessment of competency and produce a personal professional development plan	N/A

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
<b>Accredited Timber Evaluator</b>	Senior or supervisory role with a minimum of five years of timber cruising experience and competencies	Must complete an annual self-assessment of competency and produce a personal professional development plan	N/A
<b>Qualified Well Pump Installer</b>	2 years (4000 hrs) field experience	Annual CEUs required for CGWA certified persons (however, the CGWA declared bankruptcy in 2013 Continuation of CEUs is no longer feasible)	.
<b>Qualified Well Driller</b>	2 years (3600 hrs) field experience for ITA and 4000 hrs for CGWA	Annual CEUs required for CGWA certified persons (however, the CGWA declared bankruptcy in 2013 Continuation of CEUs is no longer feasible)	
<b>Environmental Professional</b>	5 or more years of relevant experience for EP-level certification, 5 and under for in-training	PD is mandatory for all EP-level members (min. 10 credits per year and 55 at 5-year term renewal)	EP-level term renewal every 5 years, regardless of status (Practicing, Non-Practicing, Emeritus) or specialization(s)
<b>Blasting - open pit &amp; u/ground</b>	6 months with a blasting crew	Recertification every 5 years	Recertification every 5 years
<b>Shift Boss - open pit &amp; U/ground</b>	3 years experience at mine	First aid renewed every 3 years	Not required, first aid renewed every 3 years

<b>QP Type by Discipline / Activity</b>	<b>Period of experience requirement for membership (describe)</b>	<b>Professional development required of members (describe)</b>	<b>Re-certification requirements applied for specialties, if any (describe)</b>
<b>Mine Rescue - open pit &amp; u/ground</b>	8 hours practice every 3 months	8 hours practice every 3 months	Recertification every 5 years, active members do not require recertification First aid certification renewed every 3 years
<b>Coal Blasting Certificate</b>	6 months experience with blasting crew	Recertification every 5 years	Recertification every 5 years
<b>1st Class and 2nd Class U/ground Coal Certificate</b>	Same as shift boss		No recertification required
<b>Burn Boss certificate</b>	Type 3 : 5 Type 3 Prescribed Burns Type 2 : Acted as Prescribed Fire Operations Chief on 5 Successful Type 3 Prescribed Burns Type1 : 10 Successful Prescribed Burns as Prescribed Fire Operations Chief		May have to take more courses depending on certification level
<b>Recognized Environmental Farm Planner</b>	None	Participate in annual training/upgrading sessions	



**Table 2a: Accountability Measures**

QP Type by Discipline / Activity	Legislated rights and obligations (describe)	Code of ethics included	Accountability functions separate/independent from advocacy functions (describe)
<b>Registered Professional Forester</b>	Foresters act	Yes. New enrolled members must complete workshops on Professional Ethics and Obligations, and Professional Reliance. <a href="http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeOfEthics.pdf">http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeOfEthics.pdf</a>	Forest professionals are accountable to the public, employer, profession and other professionals for their practice and conduct
<b>Registered Forest Technologist</b>	Foresters act	Yes. New enrolled members must complete workshops on Professional Ethics and Obligations, and Professional Reliance <a href="http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeOfEthics.pdf">http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFPCodeOfEthics.pdf</a>	Forest professionals are accountable to the public, employer, profession and other professionals for their practice and conduct
<b>Professional Engineer</b>	Engineers and Geoscientists Act ( Note: includes exclusive scope of practice and right to title so not only can APEGBC take disciplinary action against members the Association can take action against non-members if they practice professional engineering)	The Engineers and Geoscientists Act provides for investigative and disciplinary powers so if members are found to be in violation of the Act and Bylaws which includes the Code of Ethics they can be investigated and disciplined	APEGBC has a separate Department dealing with Regulatory Compliance which can pursue disciplinary action against members and enforcement against non-members deemed to be practicing Professional Engineering  APEGBC has other Departments dealing with advocacy related matters

QP Type by Discipline / Activity	Legislated rights and obligations (describe)	Code of ethics included	Accountability functions separate/independent from advocacy functions (describe)
<b>Professional Geoscientists</b>	Engineers and Geoscientists Act ( Note: includes exclusive scope of practice and right to title so not only can APEGBC take disciplinary action against members the Association can take action against non-members if they practice professional geoscience)	The Engineers and Geoscientists Act provides for investigative and disciplinary powers so if members are found to be in violation of the Act and Bylaws which includes the Code of Ethics they can be investigated and disciplined	APEGBC has a separate Department dealing with Regulatory Compliance which can pursue disciplinary action against members and enforcement against non-members deemed to be practicing Professional Geoscience. APEGBC has other Departments dealing with advocacy related matters
<b>Professional Biologist</b>	College of Applied Biology Act	Must complete a course in professional ethics within 3 years of being accepted	Separate Governing body only
<b>Registered Biology Technologist</b>	College of Applied Biology Act	Must complete a course in professional ethics within 3 years of being accepted	Separate Governing body only
<b>Professional Agrologist</b>	Agrologists Act	All members of the institute must comply with code of ethics and code of practice guidelines	
<b>Applied Science Technologist</b>	ASTT Act provides for restricted title and regulation of practice  Practice Guides help to frame areas of practice as does recognition as a Qualified Person / Professional	Yes, required to maintain competency and develop professionally <a href="http://www.asttbc.org/practice/ethi">http://www.asttbc.org/practice/ethi</a> <u>Members</u> are required to subscribe and adhere to a Code of Ethics	ASTTBC's advocacy activities are advisory, and primarily in support of its mandate "to regulate standards of training and practice of and for its members and to protect the interests of the public" At all times ASTTBC is guided by its responsibility to serve and protect the interests of the public

QP Type by Discipline / Activity	Legislated rights and obligations (describe)	Code of ethics included	Accountability functions separate/independent from advocacy functions (describe)
<b>Certified Technician</b>	<p>ASTT Act provides for restricted title and regulation of practice</p> <p>Practice Guides help to frame areas of practice as does recognition as a Qualified Person / Professional</p>	<p>Yes, required to maintain competency and develop professionally  <a href="http://www.asttbc.org/practice/ethi">http://www.asttbc.org/practice/ethi</a>  <u>Members</u> are required to subscribe and adhere to a Code of Ethics</p>	<p>ASTTBC’s advocacy activities are advisory, and primarily in support of its mandate “to regulate standards of training and practice of and for its members and to protect the interests of the public”  At all times ASTTBC is guided by its responsibility to serve and protect the interests of the public</p>
<b>Registered Onsite Wastewater Practitioner (ROWP)</b>	<p>Sewerage System Regulation requires registration</p>	<p>Yes, required to maintain competency and develop professionally  <a href="http://www.asttbc.org/practice/ethi">http://www.asttbc.org/practice/ethi</a>  <u>Members</u> are required to subscribe and adhere to a Code of Ethics</p>	<p>ASTTBC’s advocacy activities are advisory, and primarily in support of its mandate “to regulate standards of training and practice of and for its members and to protect the interests of the public”  At all times ASTTBC is guided by its responsibility to serve and protect the interests of the public</p>
<b>Registered in Site Improvements Surveying (RSIS)</b>	<p>Exemption in Land Surveyors Act plus agreement between ABCLS and ASTTBC on scope of practice</p>	<p>Yes, required to maintain competency and develop professionally  <a href="http://www.asttbc.org/practice/ethi">http://www.asttbc.org/practice/ethi</a>  <u>Members</u> are required to subscribe and adhere to a Code of Ethics</p>	<p>ASTTBC’s advocacy activities are advisory, and primarily in support of its mandate “to regulate standards of training and practice of and for its members and to protect the interests of the public”  At all times ASTTBC is guided by its responsibility to serve and protect the interests of the public</p>

QP Type by Discipline / Activity	Legislated rights and obligations (describe)	Code of ethics included	Accountability functions separate/independent from advocacy functions (describe)
<b>BC Land Surveyor</b>	Land surveyors act	Yes <a href="http://www.abcls.ca/?page_id=10779">http://www.abcls.ca/?page_id=10779</a>	Practice Advisory Department conducts regular reviews of survey plans and practices No advocacy component to ABCLS.
<b>Professional Archaeologist</b>	Heritage conservation act	<a href="http://www.bcapa.ca/members/bylaws/code-of-ethics-code-of-conduct-and-grievance-procedure/#ethics">http://www.bcapa.ca/members/bylaws/code-of-ethics-code-of-conduct-and-grievance-procedure/#ethics</a>	BCAPA has both accountability and advocacy functions relating to their members
<b>Professional Chemist</b>		Signed adherence to the Code of Ethics required See <a href="http://www.pchembc.ca/CodeofEthics-approved.pdf">http://www.pchembc.ca/CodeofEthics-approved.pdf</a>	Separate
<b>Contaminated Sites Approved Professional</b>	<i>Environmental Management Act</i> , Contaminated Sites Regulation	Section 67 of CSAP Bylaws <a href="http://csapsociety.bc.ca/about/governance/">http://csapsociety.bc.ca/about/governance/</a>	Members must provide the CSAP society with certificate issued to MOE with commercial liability not less than 2 million and professional liability no less than 2 million
<b>Licensed Scaler</b>	Forest Act	Scaler's oath	Separate
<b>Silviculture Accredited Surveyor</b>	Foresters Act, Resolutions of Council, bylaws, and policies and procedures published by council	Members take an ethic exam as a part of their application process and follow ethical standard in Bylaw 11  <a href="http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFCODEOFETHICS.pdf">http://www.abcfp.ca/regulating_the_profession/bylaws/documents/ABCFCODEOFETHICS.pdf</a>	Forest professionals are accountable to the public, employer, profession and other professionals for their practice and conduct

<b>QP Type by Discipline / Activity</b>	<b>Legislated rights and obligations (describe)</b>	<b>Code of ethics included</b>	<b>Accountability functions separate/independent from advocacy functions (describe)</b>
<b>Pesticide Applicator</b>	Numerous federal and provincial Acts Federal Pest Control Products Act BC Integrated Pest Management Act	None	MOE Nelson office - separate from any advocacy role
<b>Pesticide Dispenser</b>	Federal Pest Control Products Act BC Integrated Pest Management Act	None	MOE governs accountability, separate from any advocacy role
<b>Accredited Timber Cruiser</b>	Foresters Act, Resolutions of Council, bylaws, and policies and procedures published by council	Members take an ethic exam as a part of their application process and follow ethical standard in Bylaw 11	Forest professionals are accountable to the public, employer, profession and other professionals for their practice and conduct
<b>Accredited Timber Evaluator</b>	Foresters Act, Resolutions of Council, bylaws, and policies and procedures published by council	Members take an ethic exam as a part of their application process and follow ethical standard in Bylaw 11	Forest professionals are accountable to the public, employer, profession and other professionals for their practice and conduct
<b>Qualified Well Pump Installer</b>	Water Act	Responsibility to conduct work in accordance with the water act and ground water protection regulation (15 points per year)	
<b>Qualified Well Driller</b>	Water Act	Responsibility to conduct work in accordance with the water act and ground water protection regulation (15 points per year)	
<b>Environmental Professional</b>	Depends on branch	<a href="#">EP Code of Ethics</a>	

<b>QP Type by Discipline / Activity</b>	<b>Legislated rights and obligations (describe)</b>	<b>Code of ethics included</b>	<b>Accountability functions separate/independent from advocacy functions (describe)</b>
<b>Blasting - open pit &amp; u/ground</b>	Follow mine act and code	N/A	
<b>Shift Boss - open pit &amp; U/ground</b>	Follow mine act and code	N/A	
<b>Mine Rescue - open pit &amp; u/ground</b>	Follow mine act and code	N/A	
<b>Coal Blasting Certificate</b>	Follow mine act and code	N/A	
<b>1st Class and 2nd Class U/ground Coal Certificate</b>	Follow mine act and code	N/A	
<b>Burn Boss certificate</b>	Wildfire act, wildfire regulation		
<b>Recognized Environmental Farm Planner</b>	None	Only if they are members of a recognized body with such requirements	

**Table 2b: Accountability Measures**

QP Type by Discipline / Activity	Proactive practice reviews	Complaint activated practice reviews	Discipline process attached to practice review results
<b>Registered Professional Forester</b>	Mandatory peer review of 70 members per year Random selection weighted to areas of practice risk Practice reviews of 50 members per year	If the complaint is accepted, it is forwarded to the complaints resolution committee which then selects the appropriate dispute resolution mechanism to resolve the complaint	Reprimands, placing conditions on member, temporary suspension rescinding members enrolment, requirement to complete reprimand program, fines up to \$10 000, order for costs
<b>Professional Engineers</b>	Members are randomly selected on an annual basis from areas of practice where public safety/ the environment may be at risk Members cannot refuse to participate when selected to undergo a practice review	The Registrar or the Investigation Committee can refer complaints directly to the Practice Review Committee for completion of a Practice Review	If the Practice Review Committee believes that the findings from a Practice Review of a member identifies that the member is practicing in a manner which contravenes the Engineers and Geoscientists Act the report from the Practice Review can be sent to the Investigation Committee and if it is determined that they are in breach of the Act or Bylaws APEGBC can impose: a condition on their practice; a reprimand; a suspension; a cancellation of their licence or a fine of up to \$25,000, plus costs

<b>QP Type by Discipline / Activity</b>	<b>Proactive practice reviews</b>	<b>Complaint activated practice reviews</b>	<b>Discipline process attached to practice review results</b>
<b>Professional Geoscientists</b>	Members are randomly selected on an annual basis from areas of practice where public safety/ the environment may be at risk Members cannot refuse to participate when selected to undergo a practice review	The Registrar or the Investigation Committee can refer complaints directly to the Practice Review Committee for completion of a Practice Review	If the Practice Review Committee believes that the findings from a Practice Review of a member identifies that the member is practicing in a manner which contravenes the Engineers and Geoscientists Act the report from the Practice Review can be sent to the Investigation Committee and if it is determined that they are in breach of the Act or Bylaws APEGBC can impose: a condition on their practice; a reprimand; a suspension; a cancellation of their licence or a fine of up to \$25,000, plus costs
<b>Professional Biologist</b>	Annually conducted audit, by way of stratified random selection	Complaints are forwarded to Discipline Committee for investigation and a determination if it should be forwarded to Discipline Panel for a Hearing	Reprimand, penalty up to \$10 000, impose conditions on membership, complete remedial program or suspend membership
<b>Registered Biology Technologist</b>	Annually conducted audit, by way of stratified random selection	Complaints are forwarded to Discipline Committee for investigation and a determination if it should be forwarded to Discipline Panel for a Hearing	Reprimand, penalty up to \$10 000, impose conditions on membership, complete remedial program or suspend membership
<b>Professional Agrologist</b>	Member of public can make a complaint against member	Within 7 days subject of complaint must receive written copy of complaint Attempt mediation, if failed investigation	Determine no further action required, issue written notice, authorize practice review, seek consent order or take other appropriate remedial action, issue citation ordering discipline hearing



<b>QP Type by Discipline / Activity</b>	<b>Proactive practice reviews</b>	<b>Complaint activated practice reviews</b>	<b>Discipline process attached to practice review results</b>
<b>Applied Science Technologist</b>	Practice Review Board may require a Practice Assessment Review. In some areas ASTTBC is auditing practice Not applied uniformly	Practice Review Board and Registrar have legislated responsibility to receive and investigate and act on all complaints	Member is given the opportunity through Stipulated Order to resolve voluntarily Practice Review Board has full authority to sanction, impose fines and revoke registration
<b>Certified Technician</b>	Practice Review Board may require a Practice Assessment Review In some areas ASTTBC is auditing practice Not applied uniformly	Practice Review Board and Registrar have legislated responsibility to receive and investigate and act on all complaints	Member is given the opportunity through Stipulated Order to resolve voluntarily Practice Review Board has full authority to sanction, impose fines and revoke registration
<b>Registered Onsite Wastewater Practitioner (ROWP)</b>	Practice Reviews / audits being conducted This work will increase starting Fall 2014	Practice Review Board and Registrar have legislated responsibility to receive and investigate and act on all complaints	Member is given the opportunity through Stipulated Order to resolve voluntarily Practice Review Board has full authority to sanction, impose fines and revoke registration
<b>Registered in Site Improvements Surveying (RSIS)</b>	Anticipate ramping up random practice reviews in 2015 – 2016	Practice Review Board and Registrar have legislated responsibility to receive and investigate and act on all complaints	Member is given the opportunity through Stipulated Order to resolve voluntarily Practice Review Board has full authority to sanction, impose fines and revoke registration

<b>QP Type by Discipline / Activity</b>	<b>Proactive practice reviews</b>	<b>Complaint activated practice reviews</b>	<b>Discipline process attached to practice review results</b>
<b>BC Land Surveyor</b>	Practice Advisory Department conducts Practice Reviews and Plan Reviews regularly	Board has full power to inquire into suspected breach of bylaws and order a Practice Review with / or without a public complaint to initiate this process	Censure member, suspension, fine no more then \$5000, ordered participation in peer monitoring or educational program at members' expense Suspension not more than 6 months Prohibit former members from applying to be reinstated Disciplinary findings are publically displayed on the ABCLS web site
<b>Professional Archaeologist</b>	Currently BCAPA does no pro-active reviews	A director shall, upon receipt of complaint against member, acknowledge complaint within 7 days Within 30 days directors must notify all named parties and meet to discuss appropriate action	If unprofessional conduct did occur, a remediation committee will be appointed For more info see part 5 page 8 ( <a href="http://www.bcapa.ca/wp-content/uploads/BCAPABylawsRev2009-10-05.pdf">http://www.bcapa.ca/wp-content/uploads/BCAPABylawsRev2009-10-05.pdf</a> )
<b>Professional Chemist</b>	Minimum of 10% of all professional members reports audited annually	From website complaint solicitation, all complaints investigated on intake by registrar for discipline process referral or decline to act: Review of practice and membership qualifications	Upon determination of unskilled practice or unprofessional conduct, a member may removed from the roster of members in good standing for a period of time or permanently, additional training or development may be assigned and process allows for fines/cost recovery See <a href="http://www.pchembc.ca">www.pchembc.ca</a> for detailed process, terms of reference and membership of discipline committee
<b>Contaminated Sites Approved Professional</b>	1 in 8 submissions randomly selected for performance assessment review The performance	Part V of CSAP bylaws addresses complaint procedures: <a href="http://csapsociety.bc.ca/about/governance/">http://csapsociety.bc.ca/about/governance/</a>	Part V of CSAP bylaws addresses discipline procedures: <a href="http://csapsociety.bc.ca/about/governance/">http://csapsociety.bc.ca/about/governance/</a>

QP Type by Discipline / Activity	Proactive practice reviews	Complaint activated practice reviews	Discipline process attached to practice review results
	committee may also conduct targeted performance assessment of submissions Remedial measures are discussed in Part F CSAP's bylaws <a href="http://csapsociety.bc.ca/about/governance/">http://csapsociety.bc.ca/about/governance/</a>		
<b>Licensed Scaler</b>	Audits	District to Regional Executive Director and possibly Assistant Deputy Minister for action	Could be hearing with the ADM for suspension or cancellation
<b>Silviculture Accredited Surveyor</b>	N/A Voluntary peer reviews and self-assessment	If the complaint is accepted, it is forwarded to the complaints resolution committee which then selects the appropriate dispute resolution mechanism to resolve the complaint	Reprimands, placing conditions on member, temporary suspension rescinding members enrolment, requirement to complete reprimand program, fines up to \$10 000, order for costs
<b>Pesticide Applicator</b>	None	MOE IPM Program and Agriculture Farm Industry Review Board	Use of training compliance under the BC IPMA
<b>Pesticide Dispenser</b>	None	MOE IPM or Health Canada PMRA	MOE compliance under the BC IPMA
<b>Accredited Timber Cruiser</b>	N/A Voluntary peer reviews and self-assessment	If the complaint is accepted, it is forwarded to the complaints resolution committee which then selects the appropriate dispute resolution mechanism to resolve the complaint	Reprimands, placing conditions on member, temporary suspension rescinding members enrolment, requirement to complete reprimand program, fines up to \$10 000, order for costs

<b>QP Type by Discipline / Activity</b>	<b>Proactive practice reviews</b>	<b>Complaint activated practice reviews</b>	<b>Discipline process attached to practice review results</b>
<b>Accredited Timber Evaluator</b>	N/A Voluntary peer reviews and self-assessment	If the complaint is accepted, it is forwarded to the complaints resolution committee which then selects the appropriate dispute resolution mechanism to resolve the complaint	Reprimands, placing conditions on member, temporary suspension rescinding members enrolment, requirement to complete reprimand program, fines up to \$10 000, order for costs
<b>Qualified Well Pump Installer</b>	Currently N/A	Currently N/A	Currently N/A
<b>Qualified Well Driller</b>	Currently N/A	Currently N/A	Currently N/A
<b>Environmental Professional</b>	All members are subject to Random surveillance on a monthly basis (based on month of certification) where PD evidence in addition to activities must be submitted, employment validated, and audit/work logs validated (if applicable)	Anyone who believes a member is in contravention to the EP Code of Ethics can file a complaint The Registrar notifies the Approvals Board (CECAB) that a complaint has been received, a complaint package is sent to the Chair of the Ethics and Disciplinary Committee where the specifics and validity of the complaint are examined If necessary, an investigative panel is formed to determine if the member is actually in contravention to the EP Code of Ethics	Sanctions imposed at the discretion of the Ethics and Disciplinary Committee
<b>Blasting - open pit &amp; u/ground</b>		Investigation of and report about an accident that has caused serious personal injury, loss of life or property or environmental damage	If the mine manager or inspector are not happy with the performance of the blaster or shift boss, they can suspend their certificate
<b>Shift Boss - open pit &amp; U/ground</b>		Investigation of and report about an accident that has caused serious personal injury, loss of life or property or environmental damage	If the mine manager or inspector are not happy with the performance of the blaster or shift boss, they can suspend their certificate

<b>QP Type by Discipline / Activity</b>	<b>Proactive practice reviews</b>	<b>Complaint activated practice reviews</b>	<b>Discipline process attached to practice review results</b>
<b>Mine Rescue - open pit &amp; u/ground</b>		Investigation of and report about an accident that has caused serious personal injury, loss of life or property or environmental damage	
<b>Coal Blasting Certificate</b>		Investigation of and report about an accident that has caused serious personal injury, loss of life or property or environmental damage	
<b>1st Class and 2nd Class U/ground Coal Certificate</b>		Investigation of and report about an accident that has caused serious personal injury, loss of life or property or environmental damage	
<b>Burn Boss certificate</b>			
<b>Recognized Environmental Farm Planner</b>		Only if there is a filed complaint	

**Table 3: Guidance**

QP Type by Discipline / Activity	Are there minimum legal technical requirements such as standards, protocols, applied to practice (describe)	Are there voluntary technical guidelines such as BMPs, SOPs, recommended methods applied to practice (describe)
<b>Registered Professional Forester</b>	ABCFP Bylaws governing practice and conduct Other legislation and regulation requirements e.g. Work Safe requirements for professional service; Riparian Area Regulation	Interpretative Guidance for each bylaw and several professional practice guidance documents
<b>Registered Forest Technologist</b>	ABCFP Bylaws governing practice and conduct Other legislation and regulation requirements e.g. Work Safe requirements for professional service; Riparian Area Regulation	Interpretative Guidance for each bylaw and several professional practice guidance documents
<b>Professional Engineers</b>	There are 7 Quality Management requirements in the Engineers and Geoscientists Act which members must follow	Yes and upon entering the professions the Association's Bylaws require that members have "sufficiently broad-based competency in , or knowledge of guidelines published by the Council and relevant to the practice"
<b>Professional Geoscientists</b>	There are 7 Quality Management requirements in the Engineers and Geoscientists Act which members must follow	Yes and upon entering the professions the Association's Bylaws require that members have "sufficiently broad-based competency in , or knowledge of guidelines published by the Council and relevant to the practice"
<b>Professional Biologist</b>	Yes, developed by Council	Yes, developed by Council
<b>Registered Biology Technologist</b>	Yes, developed by Council	Yes, developed by Council

<b>QP Type by Discipline / Activity</b>	<b>Are there minimum legal technical requirements such as standards, protocols, applied to practice (describe)</b>	<b>Are there voluntary technical guidelines such as BMPs, SOPs, recommended methods applied to practice (describe)</b>
<b>Professional Agrologist</b>	Take part in the Articling Agrologist Program and be employed in the practice of agrology for a minimum of two years	Maintain a standard of integrity, fairness and competence
<b>Applied Science Technologist</b>	ASTTBC has some technical practice guides in place that frames best practice Members are required to adhere to ASTTBC standards	In some fields / disciplines as noted adjacent
<b>Certified Technician</b>	ASTTBC has some technical practice guides in place that frames best practice Members are required to adhere to ASTTBC standards	In some fields / disciplines as noted adjacent
<b>Registered Onsite Wastewater Practitioner (ROWP)</b>	Sewerage System Regulation and Ministry of Health Standard Practice Manual	Various guides which are mandatory including Ministry of Health's Standard Practice Manual and ASTTBC Practice Guide for ROWP
<b>Registered in Site Improvements Surveying (RSIS)</b>	Agreement between ABCLS and ASTTBC spells out scope of practice and outlines some technical standards	Agreement between ABCLS and ASTTBC spells out scope of practice and outlines some technical standards
<b>BC Land Surveyor</b>	Survey rules and statutory regulations	Professional Reference Manual
<b>Professional Archaeologist</b>	One must adhere to the code of conduct and code of ethics of the BCAPA to be a member under the provincial law that allows the BCAPA to exist as a non-profit	Members of the society have a responsibility to contribute to the advancement of archaeology, by developing professional knowledge and skills, and by sharing this information and skills
<b>Professional Chemist</b>		
<b>Contaminated Sites Approved Professional</b>	Extensive policies, procedures and guidance have been developed by the Land Remediation Section of MOE	CSAP has developed extensive practice guidelines for its members
<b>Licensed Scaler</b>	Statutory requirements of Forest Act	Scaling manuals, and regulations and policies

<b>QP Type by Discipline / Activity</b>	<b>Are there minimum legal technical requirements such as standards, protocols, applied to practice (describe)</b>	<b>Are there voluntary technical guidelines such as BMPs, SOPs, recommended methods applied to practice (describe)</b>
<b>Silviculture Accredited Surveyor</b>	Bylaw 11. Code of Ethics Bylaw 12. Standards of Professional Practice	Interpretative Guidance for each bylaw and several professional practice guidance documents
<b>Pesticide Applicator</b>	Integrated Pest Management Act and Regulations	Manuals, training materials
<b>Pesticide Dispenser</b>	Association of warehousing Standards Integrated Pest Management Act and Regulations	Manuals, training materials
<b>Accredited Timber Cruiser</b>	Bylaw 11. Code of Ethics Bylaw 12. Standards of Professional Practice	Interpretative Guidance for each bylaw and several professional practice guidance documents
<b>Accredited Timber Evaluator</b>	Bylaw 11. Code of Ethics Bylaw 12. Standards of Professional Practice	Interpretative Guidance for each bylaw and several professional practice guidance documents
<b>Qualified Well Pump Installer</b>	Standards related to well pump installation under the Water Act	
<b>Qualified Well Driller</b>	Standards related to well drilling under the Water Act	
<b>Environmental Professional</b>		
<b>Blasting - open pit &amp; u/ground</b>	N/A	N/A
<b>Shift Boss - open pit &amp; U/ground</b>	Knowledge of mine act/code, mine rescue, first aid and blasting	N/A
<b>Mine Rescue - open pit &amp; u/ground</b>	N/A	N/A
<b>Coal Blasting Certificate</b>	N/A	N/A
<b>1st Class and 2nd Class U/ground Coal Certificate</b>	Knowledge of mine act/code, mine rescue, first aid and blasting	N/A



QP Type by Discipline / Activity	Are there minimum legal technical requirements such as standards, protocols, applied to practice (describe)	Are there voluntary technical guidelines such as BMPs, SOPs, recommended methods applied to practice (describe)
Burn Boss certificate		
Recognized Environmental Farm Planner		

**Table 4: Contributors**

<b>QP Type by Discipline / Activity</b>	<b>Contact</b>
<b>Registered Professional Forester</b>	Mike Larock RPF, Association of BC Forest Professionals,
<b>Registered Forest Technologist</b>	Mike Larock RPF, Association of BC Forest Professionals,
<b>Professional Engineers and Geoscientists</b>	Peter Mitchell, Association of Professional Engineers and Geoscientists of BC
<b>Professional Geoscientist</b>	Peter Mitchell, Association of Professional Engineers and Geoscientists of BC
<b>Professional Biologist</b>	Linda Stordeur, College of Applied Biology
<b>Professional Agrologist</b>	Robert Moody PAg, RPBio Executive Director/Registrar BC Institute of Agrologists
<b>Applied Science Technologist</b>	John Leech , Chief Executive Officer, Charles Joyner, Registrar and others from the Applied Science Technologists and Technicians of BC
<b>Certified Technician</b>	John Leech , Chief Executive Officer, Charles Joyner, Registrar and others from the Applied Science Technologists and Technicians of BC
<b>Registered Onsite Wastewater Practitioner</b>	John Leech , Chief Executive Officer, Charles Joyner, Registrar and others from the Applied Science Technologists and Technicians of BC
<b>Registered in Site Improvements Surveying</b>	John Leech , Chief Executive Officer, Charles Joyner, Registrar and others from the Applied Science Technologists and Technicians of BC
<b>BC Land Surveyor</b>	R. Chad Rintoul, Chief Administrative Officer, Association of BC Land Surveyors
<b>Professional Archaeologist</b>	Ginelle Taylor, Kim Berg, Barbara Horrel, BC Association of Professional Archaeologists
<b>Contaminated Sites Approved Professional</b>	Catherine Schachtel, Contaminated Sites Approved Professionals Society, Vince Hanemayer, Ministry of Environment
<b>Licensed Scaler</b>	Keith Tudor, Ministry of Forests, Lands and Natural Resource Operations
<b>Silviculture Accredited Surveyor</b>	David Weaver Ministry of Forests, Lands and Natural Resource Operations
<b>Pesticide Applicator</b>	Madeline Waring, Ministry of Agriculture; Daphne Dolhaine , Ministry of Environment
<b>Pesticide Dispenser</b>	Madeline Waring , Ministry of Agriculture; Daphne Dolhaine Ministry of Environment
<b>Accredited Timber Cruiser</b>	Mike Larock RPF, Association of BC Forest Professionals, Keith Tudor, Ministry of Forests, Lands and Natural Resource Operations
<b>Accredited Timber Evaluator</b>	Mike Larock RPF, Association of BC Forest Professionals, Keith Tudor, Ministry of Forests, Lands and Natural Resource Operations
<b>Qualified Well Pump Installer</b>	Mike Wei, Ministry of Environment
<b>Qualified Well Driller</b>	Mike Wei, Ministry of Environment
<b>Environmental Professional</b>	Elizabeth Bowman, Certification Registrar, ECO Canada
<b>Blasting - open pit &amp; u/ground</b>	Rolly Thorpe, Ministry of Energy and Mines

<b>QP Type by Discipline / Activity</b>	<b>Contact</b>
<b>Shift Boss - open pit &amp; U/ground</b>	Rolly Thorpe, Ministry of Energy and Mines
<b>Mine Rescue - open pit &amp; u/ground</b>	Rolly Thorpe, Ministry of Energy and Mines
<b>Coal Blasting Certificate</b>	Rolly Thorpe, Ministry of Energy and Mines
<b>1st Class and 2nd Class U/ground Coal Certificate</b>	Rolly Thorpe, Ministry of Energy and Mines
<b>Burn Boss certificate</b>	Todd Nessman, Ministry of Forests, Lands and Natural Resource Operations
<b>Professional Chemists</b>	Paul West, President , and Tom Fyles, Registrar, Association of the Chemical Profession of BC
<b>Recognized Environmental Farm Planner</b>	Geoff Hughes-Games, Ministry of Agriculture; Karen Murray, BC Agriculture Council