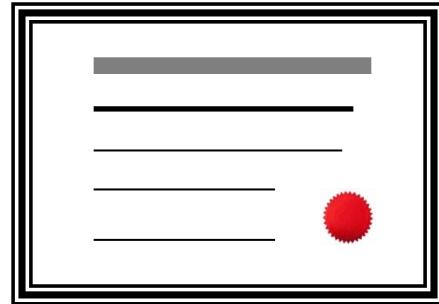


# A Preliminary Guide to the Use of Qualified Persons in the Natural Resource Sector



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# Table of Contents

## Contents

1	Introduction.....	1
2	What is a qualified person? .....	1
3	Reasons for using qualified persons.....	2
4	Functions of qualified persons .....	3
5	Framework for the use of qualified persons .....	3
5.1	Parties to the use of qualified persons .....	4
5.2	Essential components .....	4
5.2.1	Guidance .....	5
5.2.2	Competency .....	5
5.2.3	Accountability .....	6
5.2.4	Framework Models .....	7
5.3	The QP model development and improvement cycle .....	8
6	Developing and implementing a QP model.....	9
6.1	Plan: Identifying Opportunities and Designing the Model .....	9
6.1.1	STEP 1 Identifying opportunities.....	9
6.1.2	STEP 2 Evaluate the benefits, costs and risks .....	11
6.1.3	STEP 3 Design the QP model.....	12
6.2	Do: Doing the work .....	13
6.2.1	STEP 4 Putting the model into practice .....	13
6.3	Check: Evaluating the effectiveness of using QPs.....	14
6.3.1	STEP 5 Evaluating the effectiveness of the model.....	14
6.4	Adjust: Making improvements where needed. ....	15
6.4.1	STEP 6 Address issues .....	15
6.4.2	STEP 7 Share learnings .....	15
6.5	Improving existing uses.....	15
7	Additional considerations.....	16

7.1	Multiple accountabilities of professionals .....	16
7.2	Unfortunate events.....	16
8	Examples of the use of qualified persons in the natural resources sector .....	17
8.1	Case studies.....	17
8.2	The QP inventory.....	18
9	Summary.....	18
	Appendix 1 Qualified Persons Working in the Natural Resources Sector in British Columbia....	19
	Appendix 2 Functions of qualified persons aligned with resource project phases .....	21
	Appendix 3 Qualified persons opportunity assessment tool.....	22
	Appendix 4 Summary of Measures to support Guidance, Competency and Accountability .....	27
	Appendix 5 QP mechanisms used at different stages of a typical project cycle.....	30
	Appendix 6 Case studies.....	31

## **1 Introduction**

The agencies that regulate the use of natural resources (NRS agencies) in British Columbia continually seek opportunities to improve the effectiveness and efficiency of natural resource administration. The use of qualified persons (QPs) is one approach that has been successful in achieving this objective. This guide is intended for the use of natural resource sector agency staff who work in areas related to the regulation of the use of natural resources, and it is hoped that the information provided will help staff to

- a) understand the essential components of an efficient and effective use of qualified persons
- b) identify opportunities within their business area to make better use of the expertise of qualified persons employed by resource users
- c) design or improve regulatory models that rely on the expertise of qualified persons
- d) locate more detailed information.

This guide focuses on better utilization of qualified persons who are hired (on staff or on contract) by resources users. In this document, the term “resource users” includes holders of an authorization, proponents seeking an authorization, or other persons conducting a regulated natural resource activity. The phrase “better utilization” can refer to a new role for qualified persons that may or may not be routinely employed by resource users, or an improvement in the utilization of qualified persons who already play a role in the administration of natural resources.

Most of the papers referenced in this guide are available through the [home page](#) for “Qualified persons in the natural resource sector”, on the BC government web site. The site can also be found by searching this term. The case studies, and this guide, are available on the [NRS intranet](#).

## **2 What is a qualified person?**

A qualified person is one who possesses the specified knowledge, skills, training, experience and other requirements to perform a specified type of work as:

- set out in legislation
- set out in government policy, or
- required by an organization satisfactory to government that has the responsibility for specifying the requirements

The requirements include holding an accreditation bestowed by:

- government
- a professional association constituted under an act, or
- other organization satisfactory to government

Attainment of the requirements is either

- verified through a process undertaken by government, a professional association, or other organization satisfactory to government, to confirm that all requirements are met, or
- self-assessed by members of a professional association constituted under an act where a code of ethics requires members to operate only within their area of expertise

Qualified persons may be registered professionals, or accredited practitioners. Table 1 shows a number of ways in which a person can become qualified. A list of qualified persons currently working in the natural resource sector can be found in Appendix 1.

Table 1. Different approaches to becoming qualified persons.

Qualified Persons			
Self-regulating professionals		Accredited practitioners	
Legislated self-regulating professionals	Non-legislated self-regulating professionals	Accredited by an organization acceptable to government	Accredited by government
Roster managed by government or other organization			
Meets criteria specified in legislation or policy.			

Professional reliance is a particular approach where the qualified person involved belongs to a self-regulating professional association and takes on a greater measure of accountability for their work.

More information on the ways in which persons can become qualified can be found in [Use of qualified persons in the Provincial administration and management of natural resources in British Columbia](#), Qualified Persons Cross-Ministry Working Group, 2014

### 3 Reasons for using qualified persons

Qualified persons may be brought into an administrative regime for a number of reasons:

- To assure higher quality work
- To minimize the risks of an activity
- To realize efficiencies for government or clients
- To improve outcomes
- To allow government to focus their resources on the more complex or higher risk activities or aspects of activities
- To allow latitude for trying new approaches, with the assurance of expertise and judgement in the selection and use
- To reduce the need for government approvals

- To transfer the responsibility and accountability for an activity or project components to the QP

While there are many good reasons for relying on qualified persons, it should be noted that, where the goal is improved regulatory efficiency, use of qualified persons is just one approach, and others may be more suitable or cost effective in a particular situation. Some alternatives are client self-service, providing more guidance for applicants, reducing the number of permits needed, regulatory standards in lieu of permits, or moving from authorization to notification.

## **4 Functions of qualified persons**

While qualified persons working in the natural resource sector come from a variety of disciplines, and work in a variety of commercial or industrial sectors, an inventory of the work QPs are currently doing showed that they conduct similar functions. Seventeen common ones have been identified:

- Develop standards
- Gather and provide information
- Predict impacts
- Prepare applications
- Prepare plans
- Provide consultation
- Design facilities and structures
- Design operational programs
- Support statutory decision-makers
- Supervise activities
- Conduct activities
- Provide reporting
- Verify compliance
- Provide peer reviews
- Provide training
- Troubleshoot
- Act as an expert witness

These functions tend to fall into different project phases, as shown in Appendix 2. More information on the use of QPs in the natural resource sector, and examples of each function, can be found in [Use of qualified persons in the Provincial administration and management of natural resources in British Columbia](#) (the QP inventory), Qualified Persons Cross-Ministry Working Group, 2014.

More specific information on the use of qualified persons for compliance verification can be found in [The Use of Qualified Persons for Compliance Verification](#), Edquist and Roberts, 2013.

## **5 Framework for the use of qualified persons**

In order for a use of QPs to be efficient and effective from an economic, environmental and social perspective, it must be set within a governance structure that adequately supports the use. In consultation with government staff, industry, qualified persons, professional associations and public interest stakeholders, a framework has been developed to guide staff, industry and qualified persons in the development of new uses of qualified persons, and the improvement of existing uses. The framework is necessarily high level in order to be relevant to

the broad range of ways that QPs are used across the sector. Despite this, it has the ability to address many of the issues and concerns about QP use, and provides a common lens and language. The framework consists of two main parts: a) the essential components, and b) a QP model development and improvement cycle.

## 5.1 Parties to the use of qualified persons

As shown in Figure 1, five parties have an interest in the efficient and effective operation of a regulatory model that relies on the use of qualified persons (QP model), whether as a participant or as a stakeholder.

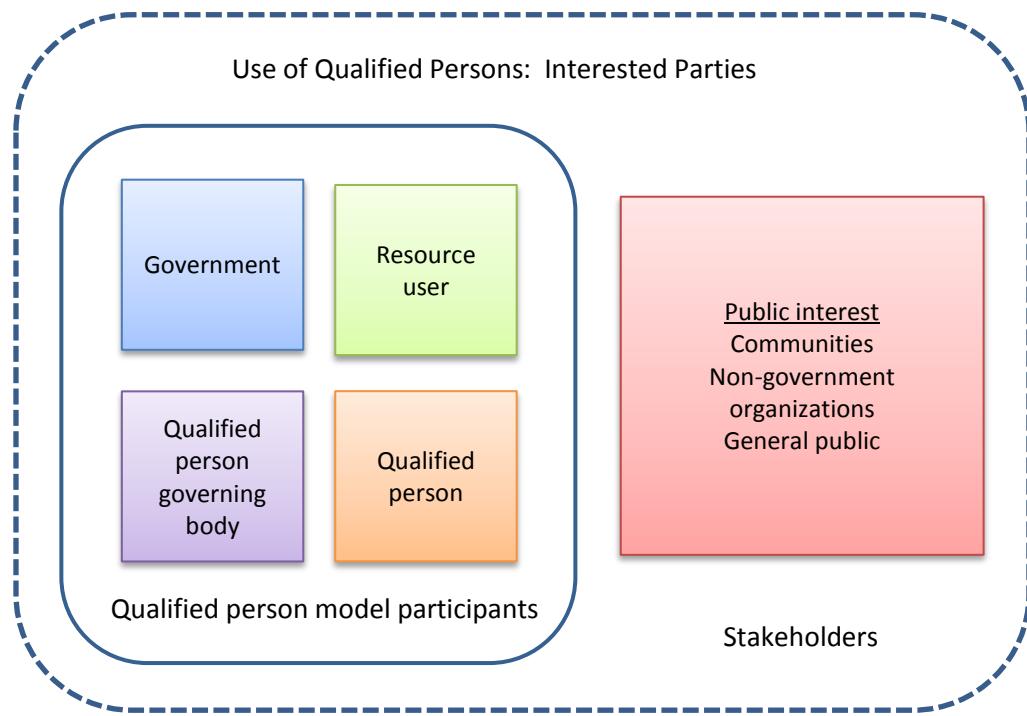


Figure 1. Interested parties to the use of qualified persons

The qualified person, the resource user, the qualified person governing body, and government are all participants in a use of qualified persons.

The fifth party consists of all others who have an interest in the sustainable management and use of public resources including communities, non-government organizations and the general public. It is recognized that First Nations have unique interests in the land which are not depicted in this model.

## 5.2 Essential components

The main part of the framework consists of three essential components that need to be in place for government and resource users to feel confident that they can rely on the work of qualified persons, and for the public to feel that this approach can support responsible management of natural resources. The essential components are: guidance, competency, and accountability, as shown in Figure 2.

Guidance	Competency	Accountability
<p>Resource and technical guidance or direction for QPs</p> <ul style="list-style-type: none"> <li>• Objectives, standards, guidelines, codes of practice, BMPs, land use designations, resource use priorities, etc.</li> <li>• Legal and non-legal</li> </ul>	<p>Appropriate education, training and experience</p> <ul style="list-style-type: none"> <li>• May include specialization, professional development, re-certification, etc.</li> </ul>	<p>Measures to ensure acceptable performance</p> <ul style="list-style-type: none"> <li>• Accountabilities <ul style="list-style-type: none"> <li>○ QP: to resource user, association, public</li> <li>○ QP Association: to public, government</li> <li>○ Resource User: to government</li> <li>○ Government: to public</li> </ul> </li> </ul>

Figure 2: Essential components of the framework for the use of qualified persons

### 5.2.1 Guidance

In order for QPs to complete work to acceptable standards, or to make recommendations that will be acceptable to natural resource managers as well as their employers or clients, they require sufficient guidance to clarify or assure expected outcomes, and enable performance evaluation through monitoring or audits. Guidance may be in legal or non-legal forms. The guidance may include any or all of the following: desired results or outcomes, resource management objectives, statements of government's intent for resource values, regulatory standards, methodological standards, and practice guidelines, among many other possible guidance materials. This guidance serves either as goal posts to aim for (in results-focused regimes), or a rule book to play by (in prescriptive regimes). Either or both may be needed, and there may be different guidance for different QP functions within an authorization type or project life cycle. Guidance may be produced by government, professional associations, or other organizations that set standards for professions or activities, or may be jointly produced by any combination of these three.

### 5.2.2 Competency

Government and resource users need to be sure that persons who are relied upon to carry out activities or provide advice are competent. One way of ensuring this is for the person to have to prove competence in order to be permitted to conduct the activities, or provide advisory services. Competency is usually determined by some form of governing body, whether it is a government agency, a professional association, or other non-government organization. In some cases, however, the person may be deemed to be qualified if they meet criteria specified in regulation.

**Government** plays a number of different roles in defining and supporting this component. It may establish legislation for a professional organization and specify requirements, or categories of requirements that must be met. It may directly certify QPs through testing, and the granting

of licences or permits, or it may establish and manage rosters of QPs that meet the competency requirements established by the agency for specific work.

**Professional associations** also play a role in defining competency, by establishing or administering the knowledge, education, training and experience requirements that must be met in order to be admitted to the association.

**Other organizations** may also play a role in establishing and maintaining competency.

### **5.2.3 Accountability**

Framework elements that support accountability help ensure acceptable performance, with consequences if performance is unacceptable. All four model participants have a role to play in supporting accountability.

**Qualified persons** are accountable to their employer or client. Those who belong to a professional association are also accountable to their association, and to the public if there is a legislated duty to uphold or protect the public interest. Professionals are typically held to a higher duty of care to protect the environment and the public, than are non-professionals. Accredited practitioners may or may not have an association to which they are accountable. In some cases, they are accredited by a professional association, and are subject to similar accountability measures as the professionals in their association. In other cases, the accreditation is provided by government, and there is no association. If this is the case, they are accountable primarily to their employer, within the terms of the hiring agreement. The incentive to perform well is to continue to be employed or hired. However, there may still be some accountability measures in place, such as an oath, code of conduct or an ability to revoke the accreditation for poor performance. The public interest is upheld primarily through the resource users' accountability to the Province to fulfill their obligations.

**The resource user** is accountable to government for the terms and conditions of the applicable authorization, and the legal obligations related to it.

**Professional associations** may have a number of provisions in place to hold their members accountable for their advice or actions. These include a code of ethics, complaint procedure, proactive practice reviews, and disciplinary actions against a QP found to have violated association rules. Some associations have a legislated duty to uphold the public interest.

**Government** is accountable to the public to a) ensure that the authorization holder complies with the terms and conditions of the authorization, and b) appropriately regulate the use of natural resources. The latter may include evaluating the effectiveness of the QP model, monitoring or auditing the work of the QP, obtaining third party audits of the model or aspects of QP use, and making this information available to the public.

Government is also the governing body for many accredited practitioners, and may have powers to revoke accreditation for consistent poor performance.

#### 5.2.4 Framework Models

Each of the essential components can be supported in a variety of ways, through measures put in place primarily by government and professional associations, but resource users and other organizations can also play a role. Each combination of how the three components are supported or implemented for a particular QP use results in a QP model. Models can range from simple to complex, as shown in Figure 3.

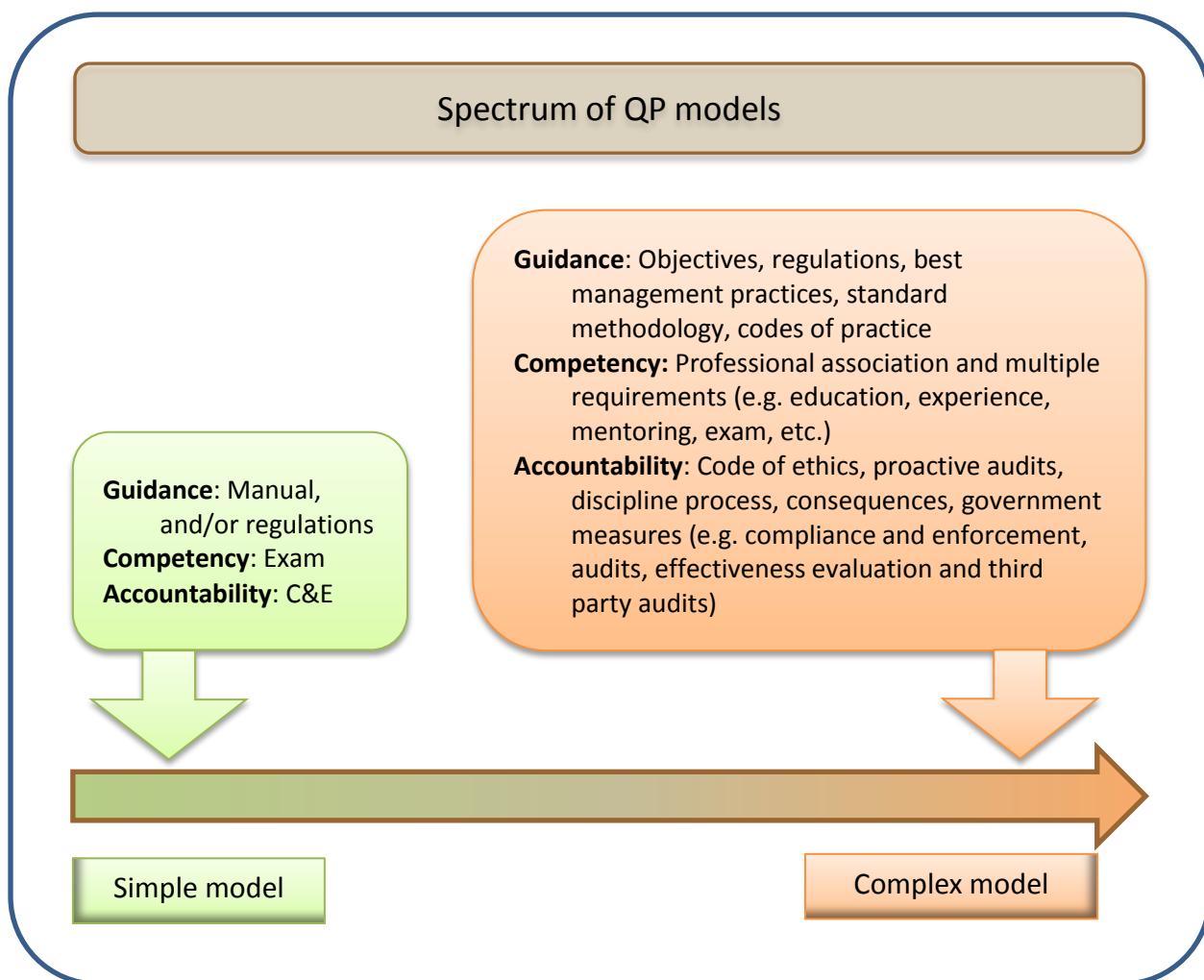
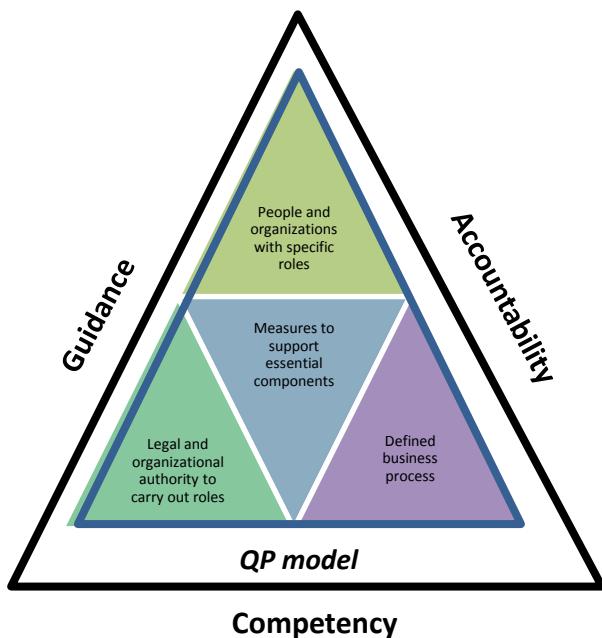


Figure 3. Spectrum of QP models, based on implementation of the three framework elements.

The measures chosen to support each component will depend on the nature and inherent risks of the activity involved and the role and responsibilities of the QP. Straightforward, lower-risk activities may require only certification of competency and a practice manual, while more complex, higher-risk activities requiring professional accountability might warrant a number of measures for each component.

The framework can be viewed as a set of design considerations for developing a QP model. As shown in Figure 4, a QP model is a system that consists of

- measures to support the essential components
- people and organizations with particular roles related to the essential components
- legal or other authority to conduct their work
- defined business process.



The framework is intended to ensure that the essential components are given particular consideration in the design or improvement of QP models across the natural resource sector. This provides a consistency of approach, while still allowing considerable flexibility to design QP models that are appropriate to the circumstances.

Figure 4. QP model within the QP framework

### 5.3 The QP model development and improvement cycle

The development of a new way of using qualified persons (a QP model), should be guided by an iterative four-stage Plan-Do-Check-Adjust (PDCA) management method (also known as the Deming cycle) as shown in Figure 5. This method is used in business for the control and continuous improvement of processes and products, and for carrying out change. Just as a circle has no end, the PDCA cycle should be repeated again and again for continuous improvement.

The general actions at each stage of the cycle are steps of the cycle are:

1. Plan: Recognize an opportunity and plan a change.
2. Do: Implement the new use of QPs.
3. Check: Assess how well the use is working
4. Adjust: Take action based on what you learned at the Check stage.

More detail is provided in Section 6.

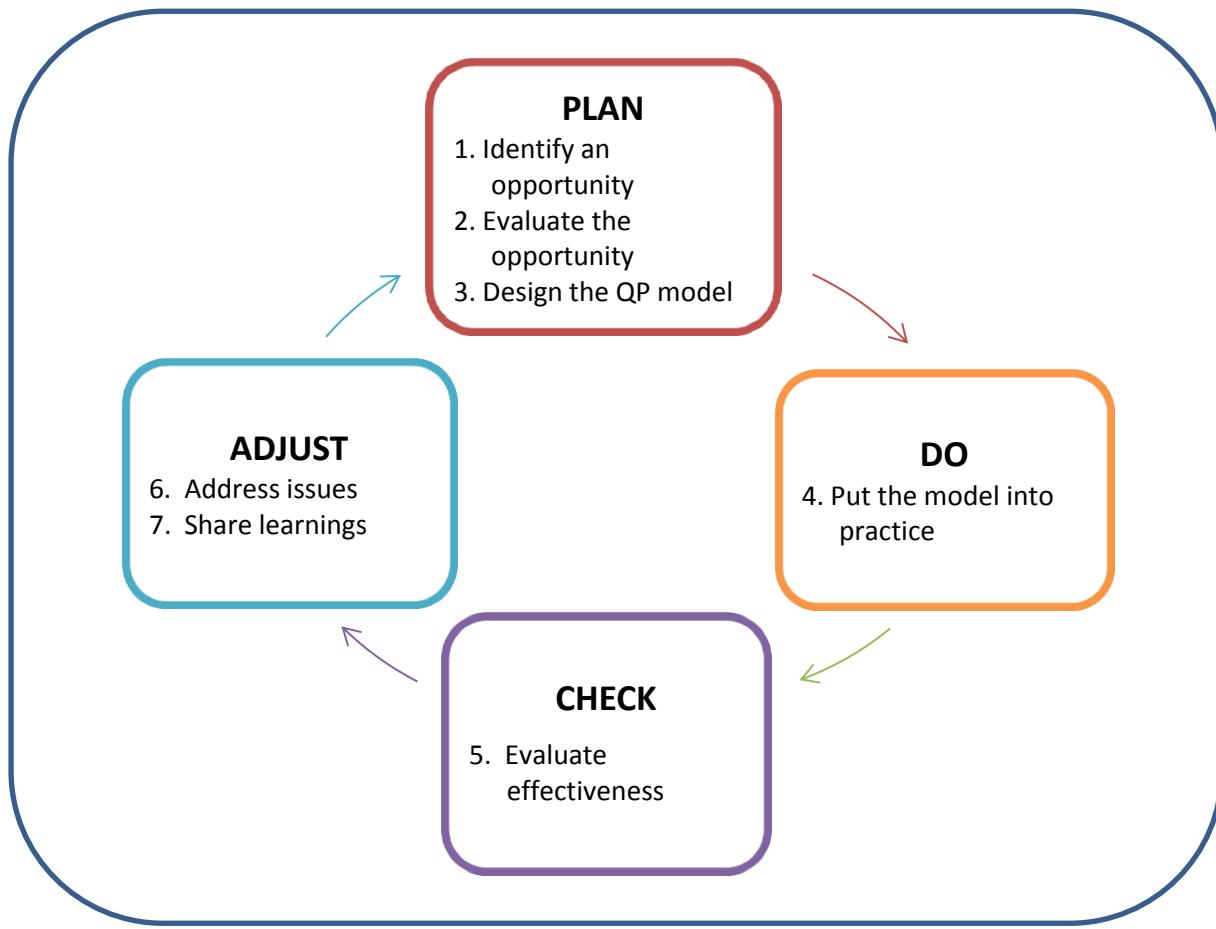


Figure 5. The qualified persons model development and improvement cycle

The remainder of this guide is based on the QP model development and improvement cycle. The content is couched in terms of developing new uses, however the same information can be used to improve, or address issues with, existing uses.

## 6 Developing and implementing a QP model

### 6.1 Plan: Identifying Opportunities and Designing the Model

In this stage, the opportunity must be identified, evaluated, and a regulatory model developed that supports the three essential components to the level appropriate for the activity and risks involved.

#### 6.1.1 STEP 1 Identifying opportunities

The following steps may be useful for helping to identify where a QP might assist in the administration of natural resource authorizations, or the conducting of natural resource activities.

- Identify where the greatest pressures are on government staff, in terms of type of authorization or activity, and the stage of the authorization or activity. This may be different for each region. Consider the following questions:

- i. What programs or functions are not efficient (e.g. they are too time consuming for staff and clients)?
- ii. What are the ‘pinch-points’ (blockages/slowdowns) in the business process for a program or function?
- iii. Are there submissions where, if QPs are used by a proponent or tenure holder to prepare work of a sufficiently high quality, government either does not need to undertake a review or can undertake a more abbreviated review process?
- iv. Are there authorizations that would not be necessary if a QP was conducting or overseeing the work?
- b) Discuss with resource users what challenges they are having with the administrative process.
- c) Using the information provided in Appendix 2, or in the [QP inventory](#), see if any of the functions a QP could carry out at the relevant project stage could be helpful.
- d) If so, identify the competencies needed, based on the function of interest, and the work to be done.
- e) Determine if QPs with the identified competencies are available and able to conduct this function.

The most immediate opportunities for expanding or fine-tuning QP involvement are where legislation is broadly enabling, and persons with suitable competencies and accountability structures already exist. The *Land Act* is an example of legislation that gives broad authority to request information or to impose conditions.

Another potential near-term area of opportunity is for better utilization of QPs already playing a role in the administration of an authorization, through changing their role or level of responsibility. Some considerations:

- Clearer guidance for the QPs in terms of objectives, results or procedures, so that government and industry are on the same page with respect to what is required of the QP.
- Clearer definition of the respective roles and responsibilities of QPs, resource users, and government staff.
- Greater reliance on QP work, commensurate with a corresponding level of accountability for QPs and/or resource users.

Consider what might be preventing government from moving to better utilization of these QPs, referencing the essential components of competency, accountability and guidance.

#### ***6.1.1.1 Development of a new QP***

If there is no existing suitable QP, some analysis is needed to identify what would be necessary to create a suitable QP, based on the function and the risks involved. The designer must consider whether accreditation is sufficient, or if the risks require the additional accountability measures that are provided by a professional association. Consider if the proposed area of

practice may fall within an existing area of professional practice, and note in particular if it is a restricted area of practice.

One option is to create a specialty within one or more existing professional associations. A governing body must also be identified, whether it is government, an existing organization, or a new organization. The cost of developing and maintaining a new QP should be estimated and factored into the evaluation of benefits, costs and risks.

If developing a new QP, or changing the requirements for an existing one, the design team must consider the labour mobility requirements of the Labour Mobility Act and Chapter 7 of the Agreement on Internal Trade. For advice on labour mobility requirements, contact [AITlabourmobility@gov.bc.ca](mailto:AITlabourmobility@gov.bc.ca).

### **6.1.2 STEP 2 Evaluate the benefits, costs and risks**

Once a particular function is identified, within a specific stage or activity of a specific type of resource use, the potential QP use can be evaluated to understand whether it is likely to produce an overall benefit. Business areas should work with industry and QPs or QP associations to explore the costs, benefits and risks for all parties, as well as the potential effect on resource values. The parties may consider agreeing on objectives or outcomes to be met by the model. Some of the objectives that are the basis for the performance measures used at the “Check” stage may be useful:

- Efficient government application processing
- Reduce remedial costs and/or risk
- Maintain or enhance resource value(s)
- Maintain or enhance human health and safety
- Improve operations
- Best use of applying skills expertise and training.

Potential risks to explore: health, safety, ecological, financial, economic, social, effect on third parties

Potential benefits to explore: reduced wait/processing time, more efficient operations, reduced costs, reduced risks, reduced potential liability, good to acceptable ecological function.

A risk-based assessment tool has been developed to help evaluate the need for and benefit of a potential QP use, and is presented in Appendix 3. This is extracted from [Use of Qualified Persons: Opportunity Assessment Tool](#), Vold and Mitchell, 2012.

### **6.1.3 STEP 3 Design the QP model**

If there is expected to be an overall benefit to the use of QPs, and a desire to proceed, the next step is to design a governance and regulatory structure (QP model) that considers and supports the three essential components (competency, accountability, and guidance). Design of the QP model is likely to fall to policy shops, though it is possible that models requiring only non-legal support mechanisms could be developed from within operational business areas. Regardless, the usual business practice of working collaboratively with resource users and any professional association or other organization that may be involved should be followed to design the QP model in a manner consistent with the framework. The designer and team should consider the competency, accountability and guidance measures needed in light of the nature and risks of the activity, and the role of the QP in that activity. The designers should also consider the role of government, industry, the QP association and the QP in supporting each of the essential components. A summary of measures that support the three essential components is provided in Appendix 4. More information on the measures put in place by specific QP governing bodies is available in [\*Measures in Place to Support the Competency and Accountability of Qualified Persons Working in the Natural Resource Sector.\*](#)

At this point, the designer will be able to determine if legislative change is needed, and to plan for this. Other governance elements include policy, procedure, non-legal guidance materials, as well as people and positions with clear roles in the model.

When considering government's role in the accountability component, it should be noted that even in full reliance models, government may still have some responsibility for the outcomes. Government should retain some ability to inspect, audit or evaluate the model, including the work of QPs, and to intervene if unacceptable work is found. While this authority may not be exercised on a regular basis for low-risk models, it is still necessary for government to have this ability to support its own role in the accountability component

#### **6.1.3.1 Defining the public interest**

Many QPs have a legal obligation to uphold or protect the public interest. Government defines the public interest to some extent through a variety of actions. The public interest may be conveyed generally through a variety of guidance materials, such as legislation, regulatory standards, and practice standards. However, the public interest in the use and protection of natural resources is influenced by, and can vary in relation to, the land, resources, and activities involved. Regional and landscape-level objectives refine the public interest to some extent. Broad or multiple public interest goals are often balanced or traded off on a site and project specific basis. The approval of a project or authorization directly or indirectly defines some aspects of the public interest, through the implicit or explicit acceptance of the anticipated outcomes

The more explicit government can be about the acceptable balance of public interests, on a project-specific basis, the easier it will be for the QP to uphold and protect them, and for the public to see how the public interest has been expressed and upheld. The closer the alignment between the public interest obligations of the QP and the tenure obligations of the resource user, the less room there should be for different objectives between the resource user and their QP.

### **6.1.3.2 Legal mechanisms supporting or requiring QP use**

There are a variety of legal or policy mechanisms that trigger or enable the involvement of QPs in the authorization management process. The report [Mechanisms Supporting or Requiring the Use of Qualified Persons in Natural Resource Administration in British Columbia](#), Bauer and Webber Atkins, 2014, provides an overview of existing mechanisms that lead to the use of QPs in the administration of resource authorizations and the management of environmental risk. These mechanisms range from specific identification in a natural resource act of what type of qualified person must be used, and what function they must perform, to generally enabling provisions, such as where the statutory decision-maker has the ability to require information. Use of QPs may be explicitly required in legislation, or may be implicit, in the case of a restricted area of practice. An overview of the different types of mechanisms identified in the report is provided in Appendix 5.

## **6.2 Do: Doing the work**

### **6.2.1 STEP 4 Putting the model into practice**

At this stage, the QPs, resource users and government carry out their work within the regulatory regime put in place. It is important that the QP, resource user, and government staff are clear on their roles and responsibilities, and address issues as they arise. There are likely many more considerations in the “Do” part of the cycle than are presented here, and this guide will be revised as new matters are identified.

#### **6.2.1.1 Roles and responsibilities**

Participants in a QP model should at this point be clear on their roles and responsibilities, and how they interact.

**Individual QPs** exercise due diligence by being prudent and careful, and carry out work to a standard that meets the test of a reasonable QP, judged by peers. QPs who are accredited or registered with associations may have additional expectations of conduct, as defined by professional and accreditation bodies, and any applicable statutes.

**Resource users** utilize and rely on the judgment and accountability of appropriate QPs, and support QPs to maintain competence and exercise due diligence. They also need to understand and respect the need for a professional to make independent judgments of how to weigh and

balance social, economic and environmental aspects, based on their training, experience and professional obligations. This independence is what enables government to rely on their work.

**Professional and accreditation bodies** provide guidance to QPs on standards of conduct and guidelines for work practices. Professional associations also receive and address complaints if they arise, or may conduct practice reviews.

**Government** may review or monitor QP work, and government professional staff provide advice to statutory decision-makers.

#### **6.2.1.2 Feedback and communication**

Communication and joint problem solving is important to support the successful operation of the QP model. Differing views can arise between government and the resource user, government and the QP, and the resource user and the QP. A process for jointly resolving issues is helpful. If there is a professional association involved, they may need to be part of the discussion as well.

### **6.3 Check: Evaluating the effectiveness of using QPs**

#### **6.3.1 STEP 5 Evaluating the effectiveness of the model**

At this stage, a team consisting of the government business area, resource users, and qualified persons involved in the QP use should jointly review how well the model is working. Other stakeholders may be included as desired and appropriate.

A performance measurement system has been developed, consisting of categories, objectives, measures, and performance drivers, collectively referred to as “metrics”, to evaluate the effectiveness of a QP use. The metrics are intended to be applied to a particular QP function or activity, within a particular authorization type and regulatory regime. The categories and measures are a guide to selecting what factors to examine, and information to acquire, in order to be able to draw conclusions about the overall effectiveness of the QP use.

The measures selected, and the categories they represent are shown in Table 2. The complete metrics are provided in [Evaluating the Effectiveness of Using Qualified Persons in the Natural Resource Sector: Preliminary Metrics](#), Hayter, 2014.

On completion of the evaluation, the evaluation team should note the strengths of the model, and what issues need to be resolved.

Table 2. Metrics for evaluating the effectiveness of the use of qualified persons.

QP Metric Category	Objective
1) Financial	Efficient government application processing
	Reduce remedial costs and/or risk during resource use
2A) Resource values and interest	Maintain or enhance resource value
	Maintain or enhance human health and safety
2B) Stakeholder: Resource User	Improve operations
2C) Stakeholder: QP	Best use of applying skills, experience and training
3) Internal business process	Create QP framework
4) Learning and improvement	Use continuous improvement principles
Evaluation outcome	How effective is the QP use, identify barriers, gaps and opportunities.

## 6.4 Adjust: Making improvements where needed.

Once the results of the effectiveness assessment are obtained, work with the evaluation team to:

- determine the cause of any undesirable outcomes
- identify opportunities for improvement
- identify strengths
- determine if the QP use needs to be implemented or supported in a different way, or if it is not an effective use of a QP

### 6.4.1 STEP 6 Address issues

Plan and implement the actions needed to address any issues and improve the model.

### 6.4.2 STEP 7 Share learnings

Consider preparing a bulletin or presentation to share with colleagues across the NR sector, advising of benefits experienced, issues encountered, measures used to address issues or gain efficiencies, and other information that may be useful to others designing and implementing QP models.

## 6.5 Improving existing uses

The QP framework is also useful for improving the effectiveness of existing QP models. The need may result from a variety of situations, at any stage of the continuous improvement model. At the “Do” stage, recurring operational issues may point to the need to adapt the model to address the issues. A review or audit of a natural resource program, activity or authorization may identify issues, serving as a “Check” stage, whether conducted by the responsible agency, or another party. The framework can be used as a diagnostic at any stage, by considering whether the measures in place to support competency, accountability and guidance are adequate for the situation and the risks involved.

## **7 Additional considerations**

Over the course of the development of the QP framework, the working group talked to, and heard from, government staff, industry, professional associations, QPs and non-government organizations. In addition, a number of agencies or organizations released reports that examined various aspects of the use of professional reliance in BC's natural resource sector. There were some common concerns expressed. Many of these can be addressed on a going-forward basis by using the framework and this guide in the development of new uses of qualified persons, or the continuous improvement of existing uses.

Following, however, are matters that are not necessarily addressed by the QP framework in its current form, but are important considerations in the design of a QP model.

### **7.1 Multiple accountabilities of professionals**

A QP hired by a resource user is accountable to their employer, to their association, and to the public where their association's legislation specifies a duty to uphold the public interest. These multiple accountabilities are sometimes viewed to result in a conflict of interest.

Because the QP is hired by the resource user, they are perceived by some parties to be biased in favour of the resource user, or subject to pressure from their employer to support plans or actions that are riskier, but favourable to the resource user. This view is reinforced for government staff when QP work they review appears unsound to them, or accepts a higher degree of risk than they are comfortable with. This view is reinforced for the public when there are safety or environmental problems that result.

While the conscientious exercise of the multiple accountabilities of the QP can and does successfully support the responsible implementation of many activities, there may be some situations where a different accountability model would be useful in providing assurance to government and the public. Some approaches that have been used are:

- Government may be involved in the selection of the QP, such as through a roster.
- Government may be involved in drafting the terms of reference for the work of the QP, such as for the hiring of accredited appraisers.
- The QP may report directly to government, while being funded by the resource user, such as with environmental monitors.

Where the risks involved appear to warrant it, QP model designers should explore alternatives and develop solutions that suit their situation.

### **7.2 Unfortunate events**

Concerns were raised by a number of parties about matters related to unanticipated and undesirable outcomes due to, or in spite of, the work or advice of a qualified person. These matters include liability for damages and the cost of remediation.

This guide is not advanced enough to be able to offer advice on these matters, or even illustrate the full range of considerations. These matters, however, should be considered at the “Plan stage, and as much clarity provided as possible.

One consideration is that liability can be made explicit in legislation, or can be left to the courts to decide. These options could be examined for the model under consideration. Some research may be needed to identify and understand common or potential liability scenarios associated with comparable types of QP use. Legal advice may also be needed.

Some mechanisms that have been used to address cost issues are the requirement for the QP to carry insurance, or the establishment of assurance funds that can cover the cost of remediation in certain circumstances. Again, the matter may warrant some research into what mechanisms have been used in comparable regulatory situations, and their suitability for the model under consideration.

## **8 Examples of the use of qualified persons in the natural resources sector**

### **8.1 Case studies**

Three case studies were undertaken to illustrate how the QP framework was supported or expressed in different regulatory regimes that relied on qualified persons. The three case studies are:

- The qualified environmental professional in the Riparian Areas Regulation.
- The contaminated sites approved professional in the Contaminated Sites Regulation.
- The registered onsite wastewater practitioner in the Sewerage System Regulation

Summaries of these QP models are provided in Appendix 6, and are also available on the NRS intranet.

A comparative analysis of the three case studies was undertaken to determine if there are any common success factors, or other learnings. Some observations were:

- The design of the model should consider and support the roles of QPs, consumers of QP services and stakeholders
- Clear roles, communications and relationships or structures among model participants and stakeholders
- All models examined included measures to support competency, accountability and guidance
- Models are strengthened by including activity monitoring and work performance as part of the governance system.

- The cost of QP services, the cost of QP governance, and end user expectations should be factored into the design and operation of the model.

## 8.2 The QP inventory

While less detailed, Appendix 2 in the [QP inventory](#) report is a comprehensive listing of current uses of qualified persons, identifying the function they carry out, and the relevant legislation they operate under. Further information on specific uses can be obtained by contacting the agency business unit responsible for the program area.

## 9 Summary

Reliance on qualified persons is a tool that can be used to improve the administration of natural resources, and to manage risks. Government staff, industry, QPs, QP associations and public interest stakeholders all have concerns about the potential costs and risks of the use of qualified persons, and while many are different, many overlap. Use of the principles and process outlined in this guide will help government staff and potential QP model participants to jointly identify those costs, benefits and risks up front, to evaluate the overall benefit, and, where it is likely to be suitable and beneficial, to design a model that is efficient for government and resource users, and effective in managing natural resources.

## Appendix 1

### Qualified Persons Working in the Natural Resources Sector in British Columbia

<b>Self-regulating professionals</b>	<b>Professional Association</b>
Registered professional forester	Association of British Columbia Forest Professionals (ABCFP)
Registered forest technologist	Association of British Columbia Forest Professionals
Professional chemist	Association of the Chemical Profession of British Columbia
Professional engineer	Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)
Professional geoscientist	Association of Professional Engineers and Geoscientists of British Columbia (APEGBC)
Applied science technologist	Applied Science Technologists and Technicians of British Columbia (ASTTBC)
Certified technician	Applied Science Technologists and Technicians of British Columbia
British Columbia land surveyor	Association of British Columbia Land Surveyors
Professional archaeologist	BC Association of Professional Archaeologists
Professional agrologist	British Columbia Institute of Agrologists
Certified management accountant	Certified Management Accountants Society of British Columbia
Certified general accountant	The Certified General Accountants Association of British Columbia
Registered professional biologist	College of Applied Biology
Contaminated Sites Approved Professionals	Contaminated Sites Approved Professionals Society
Chartered accountant	Institute of Chartered Accountants of British Columbia
Planner	Planning Institute of BC
Notary public	Society of Notaries Public of British Columbia

<b>Accredited Practitioners</b>	<b>Accrediting Body</b>
Pesticide applicator	Ministry of Environment
Pesticide dispenser	Ministry of Environment
Qualified well pump installer	Ministry of Environment
Qualified well driller	Ministry of Environment
Blasting (Open Pit and Underground) Certificate	Ministry of Energy and Mines
Shift Boss (Open Pit and Underground)	Ministry of Energy and Mines
Mine Rescue (Open Pit Surface and Underground) Certificate	Ministry of Energy and Mines
Fire Boss Certificate	Ministry of Energy and Mines
Coal Blasting Certificate	Ministry of Energy and Mines
First Class and Second Underground Coal (Management) Certificate	Ministry of Energy and Mines
Licensed scaler	Ministry of Forests, Lands and Natural Resource Operations
Silviculture Accredited Surveyor	Ministry of Forests, Lands and Natural Resource Operations
Accredited Timber Cruiser	Association of British Columbia Forest Professionals (ABC FP)
Accredited Timber Evaluator	Association of British Columbia Forest Professionals (ABC FP)
Accredited Appraisers	Appraisal Institute of Canada
Burn Boss	Ministry of Forests, Lands and Natural Resource Operations (staff certification only)
Faller	BC Forest Safety Council or ENFORM,
Falling Supervisor	BC Forest Safety Council (BCFSC)
Environmental professional	Eco Canada
Operator	Environmental Operators Certification Program

## Appendix 2

### Functions of qualified persons aligned with resource project phases

QP work in lieu of authorization*	Pre-application	Submission review, Decision	Active	Compliance Verification	Post Authorization
QPs working for resource users					
<ul style="list-style-type: none"> <li>Preparing plans</li> <li>Conducting activities according to regulations or standards</li> <li>Certification of completion, or that standards were met</li> </ul>	<ul style="list-style-type: none"> <li>Application preparation</li> <li>Plan preparation</li> <li>Structure or facility design</li> <li>First Nations consultation</li> <li>Gathering and providing information</li> <li>Predicting impacts</li> </ul>		<ul style="list-style-type: none"> <li>Environmental monitoring</li> <li>Supervising activities</li> <li>Training</li> <li>Troubleshooting</li> </ul>	<ul style="list-style-type: none"> <li>Verification that activities were completed, or carried out according to the plan , or other requirements</li> </ul>	<ul style="list-style-type: none"> <li>Verification that activities were completed, or carried out according to the plan, or met other requirements</li> <li>Expert witness</li> </ul>
QPs working for government					
	<ul style="list-style-type: none"> <li>Plan preparation</li> <li>Structure or facility design</li> <li>First Nations consultation</li> <li>Gathering and providing information</li> <li>Predicting impacts</li> </ul>	<ul style="list-style-type: none"> <li>Expert Opinion</li> <li>Predicting impacts</li> <li>Peer review</li> <li>Support to statutory decision-maker</li> </ul>	<ul style="list-style-type: none"> <li>Environmental monitoring</li> <li>Supervising activities</li> <li>Training</li> <li>Troubleshooting</li> </ul>	<ul style="list-style-type: none"> <li>Verification that activities were completed, or carried out according to the plan, or other requirements</li> </ul>	<ul style="list-style-type: none"> <li>Verification that activities were completed, or carried out according to the plan, or met other requirements</li> <li>Expert witness</li> </ul>

\*The first column is not a step in the administration of an authorization but a function carried out in lieu of an authorization

## Appendix 3

### Qualified persons opportunity assessment tool

#### **Step 1: Benefits and costs from the use of QPs**

Determine the benefits and costs that would accrue to clients, applicants or government from the potential use of QPs.

##### Mandatory

- This ranking applies where there is a legal requirement that QPs be used to carry out a function (e.g. they are specified in laws governing professional associations, or in natural resource sector legislation).

##### High

- Use of QPs is expected given the nature of the tasks to be performed.
- It is unlikely that the function (e.g. plan or application) will be acceptable without a QP being involved.
- The work is complex and the solution is uncertain (e.g. there are administrative or technical aspects that suggest the use of a QP).
- Use of QPs should improve the quality of the outcome e.g. environmental and social values.
- Use of QPs is expected to result in considerable efficiencies for proponents and government.
- Use of QPs is expected to result in cost savings (e.g. appropriate quality of work and therefore potentially lower transaction costs) for clients and government.

##### Medium

- Use of QPs is desirable given the nature of the tasks to be performed.
- Higher quality submissions or plans are expected with the use of QPs that can expedite the review and approval process.
- The work has some complex aspects and the solution is not always clear (e.g. administrative or technical aspects).
- Use of QPs should improve the quality of the outcome e.g. environmental and social values.
- Use of QPs will result in moderate efficiencies for proponents and government.
- It is cost effective to use QPs for both the client and government.

## Low

- Use QPs is not necessary given the nature of the task to be performed; however, in some instances their use will result in higher quality submissions that may streamline approvals where authorizations are required from government.
- The work is straightforward and the solution is clear (e.g. administrative or technical aspects).
- Use of QPs may improve the quality of the outcome e.g. environmental and social values.
- Costs of using QPs are not practicable given the situation (e.g. small tenure holder or client with limited resources who can't afford to hire a QP).

## **Step 2: Risk-based need for use of QPs**

Assess the type and level of risks associated with the activity.

Potential risk factors include:

- Conflict with existing tenures or uses.
- Potential First Nations rights and title.
- Environmental conflicts or impacts.
- Conflict with another government agency's resource management expectations or decisions.
- Tension with competing applications.
- Public concerns/opposition.
- Government remaining a knowledgeable owner.
- Failure to provide the most beneficial use of the land and resource.
- Financial costs, including revenue to the Crown and managing long-term liabilities.
- Availability of standard or related documents such as best management practices.
- Consequences of similar past decision.
- Cumulative effects including climate change.

Risk rating<sup>1</sup> helps identify opportunities for new or improved use of QPs based on an assessment of the relative risk of a function or program being carried out in regard to Crown land and resources. Risk analysis is the process of calculating the likelihood of an event and the consequences if it were to occur.

**Likelihood:** is the chance that the risk event identified will actually occur

<sup>1</sup> Adapted from *Risk Management Guideline for the BC Public Sector* by Province of BC (November 2010). That document supports the CAN/CSA ISO 31000 *Risk Management – Principles and Guidelines* - the international standard for risk management.

Score	Descriptor	How Likely (%)
1	Improbable - rare	Less than 5
2	Unlikely	5 - 25
3	Possible	25 - 55
4	Likely	55 - 90
5	Almost certain	90 - 99

Consequence: is the severity of effect upon goals, objectives, or values		
Score	Impact	Descriptor
1	Insignificant	Negligible effects
2	Minor	Normal administrative difficulties
3	Significant	Delay in accomplishing program or project objectives
4	Major	Program or project re-design, re-approval and re-do required. Fundamental re-work before objective can be met
5	Severe/Catastrophic	Project or program irrevocably finished; objective will not be met

The ranking of the Likelihood X Consequence results in the risk ratings (low, medium, high, and extreme) as follows:

5	Low	Medium	High	Extreme	Extreme
4	Low	Medium	High	High	Extreme
3	Low	Medium	Medium	High	High
2	Low	Low	Medium	Medium	Medium
1	Low	Low	Low	Low	Low
<b>Likelihood</b>	1	2	3	4	5
<b>Consequence</b>					

The Assessment Tool assumes that the use of QP can help to offset the potential risk. Therefore, the risk ratings are viewed as the **risk-based need** for use of QPs.

### Step 3: QP opportunity ranking (integration of Steps 2 and 3)

Categorize the opportunities for the appropriate use of QPs as follows:

Mandatory	Required	Required	Required
High	Category B	Category A	Category A
Medium	Category C	Category B	Category A
Low	Category C	Category C	Category B
Benefit/Cost –based Need	Low	Medium	High/Extreme

**Risk-based Need**

#### Examples

Here are two examples of how the opportunities may be different in each of the categories:

- (i) Approving an application and plan for use of Crown land or resources:

	Proponent	Government
Category A	Specialized or highly experienced QP needed to support proposal given risks and needs, and propose actions to minimize, mitigate or compensate potential impacts.  If appropriate QP not used.....	Specialized or highly experienced QP needed to carefully review proposal given risks and needs, and to prepare decision package for statutory decision-maker.  It may be doubtful the proposal will be accepted as potential impacts need to be adequately addressed.
Category B	Where QP is used, the application is more likely to be completed and correct thereby reducing transaction costs for both proponent and government.  If QP not used...	Government review but there is respectful regard for the proponent's QP particularly as trust is built and earned based on past practices.  Government may need to undertake a more thorough review of the proposal.
Category C	Where QP is used that follows	There may be no government

	<p>straightforward guidance....</p> <p>If QP not used....</p>	<p>approval needed (e.g. perhaps notification is sufficient), or fast tracked approval process.</p> <p>Government approval may be needed and may not get fast tracked.</p>
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(ii) Monitoring and reporting requirements of Crown land tenure are provided:

	Proponent	Government
Category A	<p>Specialized or highly experienced QP needed to monitor and report given risks and needs, and potential impacts.</p> <p>If appropriate QP not used.....</p>	<p>Specialized or highly experienced QP needed to carefully review monitoring results and report proposal given risks and needs, and advise statutory decision-maker of potential impacts or concerns.</p> <p>The monitoring may not be done correctly and the reporting may not be accurate.</p>
Category B	<p>Where QP is used, the monitoring is more likely to be undertaken correctly, and reporting accurate.</p> <p>If QP not used...</p>	<p>Government review but there is respectful regard for the proponent's QP particularly as trust is built and earned based on past practices.</p> <p>Government may need to undertake a more thorough review of the monitoring methods and findings, and the report.</p>
Category C	<p>Where QP is used that follows straightforward guidance ....</p> <p>If QP not used....</p>	<p>There may be no government approval needed (e.g. perhaps acceptance is sufficient), or fast tracked review process if required.</p> <p>Government approval may be needed and may not get fast tracked.</p>

## Appendix 4

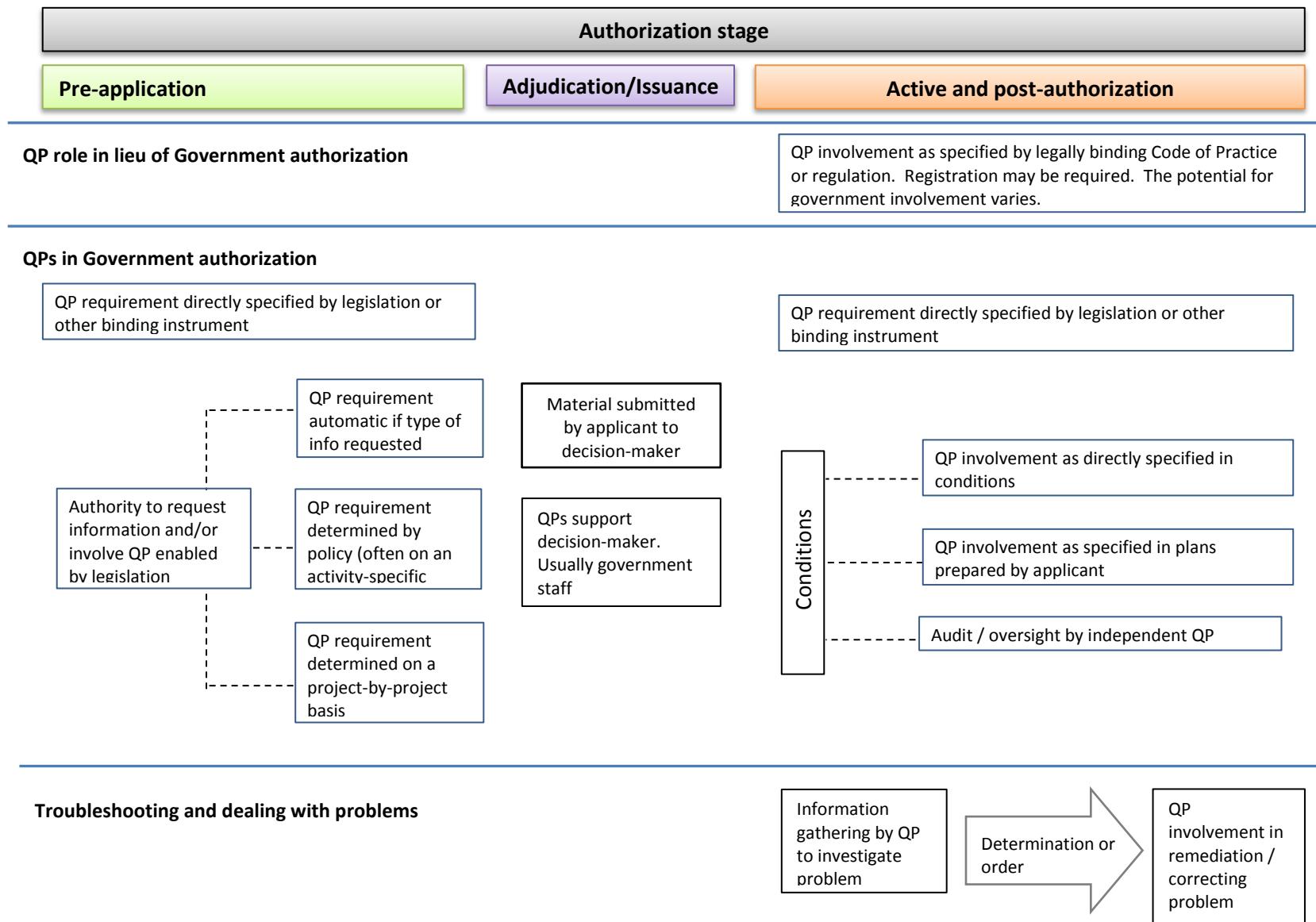
Summary of Measures to support Guidance, Competency and Accountability*	
Measures	Mechanisms or methods/Details
<b>Guidance</b>	<ul style="list-style-type: none"> <li>•</li> </ul>
Legal objectives related to results	<ul style="list-style-type: none"> <li>• Higher level plan objectives</li> <li>• Biodiversity objectives</li> <li>• Objectives for resource values in regulation</li> </ul>
Legal technical requirements	<ul style="list-style-type: none"> <li>• Resource act requirements and regulatory standards</li> <li>• Practice requirements in Association acts and bylaws</li> </ul>
Non-legal technical guidelines	<ul style="list-style-type: none"> <li>• Guidelines for the conduct of particular resource activities</li> <li>• Practice manuals</li> <li>• Standard methodology</li> <li>• Industry standards</li> <li>• Association guidelines for professional practice</li> <li>• Policies</li> </ul> <p>May be established by professional association, industry associations, standards organization, or government or any combination of these.</p>
<b>Competency</b>	
QP governing bodies	
Governing body membership required	
Education requirement for membership	
Entrance exam required for membership	
Specialty competency requirements	<ul style="list-style-type: none"> <li>• Could be within single organization, or offered by separate organization.</li> </ul>
Period of experience requirement	
Professional development	<ul style="list-style-type: none"> <li>• May be voluntary or mandatory.</li> </ul>
Re-certification requirements	<ul style="list-style-type: none"> <li>• May apply to specialty requirements, or full re-certification at intervals</li> </ul>
Currency requirements	<ul style="list-style-type: none"> <li>• Requirement for minimal level of active practice within set time frames.</li> </ul>
Training course requirement for accreditation	
Licence/accreditation exam	
<i>Government</i>	
Establish professional associations to determine/maintain competency requirements	
Establish competency requirements directly in legislation or policy.	

<b>Summary of Measures to support Guidance, Competency and Accountability*</b>	
<b>Measures</b>	<b>Mechanisms or methods/Details</b>
<b>Accountability</b>	
<i>QP governing bodies</i>	
Legislated rights and obligations	<ul style="list-style-type: none"> <li>• Legislation establishing a professional association and its duties and powers,</li> <li>• Public interest obligations, right to practice, right to title</li> <li>• Legislation establishing role and function of QP in the resource activity.</li> </ul>
Code of ethics	<ul style="list-style-type: none"> <li>• Additional measures:</li> <li>• QP signing the Code of Ethics</li> <li>• Testing the QP as part of an ethics exam.</li> <li>• QP undertaking an oath</li> <li>• May be established by bylaw</li> </ul>
Accountability functions separate/independent from advocacy functions	<ul style="list-style-type: none"> <li>• May be different departments/committees within single association, or a governing body dedicated solely to regulation of the members.</li> </ul>
Proactive practice reviews	<ul style="list-style-type: none"> <li>• Practice reviews</li> <li>• Product reviews</li> <li>• As-required</li> <li>• Set number or percentage of members annually</li> <li>• Random selection on annual basis</li> <li>• Random monthly selection for surveillance</li> <li>• Regular assessment of work product (e.g. 1 in 8 submissions reviewed)</li> <li>• Voluntary peer reviews and self-assessments</li> <li>• </li> </ul>
Complaint activated practice reviews	<ul style="list-style-type: none"> <li>• Process and procedures for handling complaints, including timelines</li> </ul>

Measures	Mechanisms or methods/Details
Discipline process attached to practice review results	<ul style="list-style-type: none"> <li>• Order to member to resolve voluntarily</li> <li>• Consent order requiring an undertaking from the member to not repeat the conduct at issue, and commit to any other actions required by the governing body.</li> <li>• Reprimand</li> <li>• Authorize practice review</li> <li>• Order a remedial program: <ul style="list-style-type: none"> <li>○ Assign additional development or training</li> <li>○ Participation in peer monitoring</li> </ul> </li> <li>• Require member to sit a special exam</li> <li>• Conditions on member's practice</li> <li>• Fines</li> <li>• Order for costs of investigation</li> <li>• Letter of censure to member</li> <li>• Disciplinary findings published, e.g. displayed on association web site</li> <li>• Suspension of membership</li> <li>• Removal from the roster</li> <li>• Revoking of registration</li> <li>• Cancellation or suspension of licence or certificate</li> <li>• Prohibit former member from applying to be reinstated.</li> </ul>
<i>Government</i>	
Compliance and enforcement activities	C & E focuses on the legal obligations of the resource user.
Monitoring of QP work performance	Assessments of the quality and standard of the work being performed by QPs.
Effectiveness evaluation	Evaluating the effectiveness of specific regulatory models that rely on QPs.
Third-party audits	Audits of performance of a QP model, the work performed, or specific aspects of QP use. Similar to the Forest Practices Board role.
Reporting	Gathering and sharing information relevant to the use of QPs

\*Summary of measures identified in *Measures in Place to Support the Competency and Accountability of Qualified Persons Working in the Natural Resource Sector*

## Appendix 5



### **QP mechanisms used at different stages of a typical project cycle.**

The boxes describe mechanisms in the *Land Act*, *FRPA*, *Water Act*, *EMA Part 2*, *OGAA*, and *Mines Act* that require or support the use of QPs. A particular regime may not use all of the mechanisms indicated.

## Appendix 6

### Registered On-site Wastewater Practitioner

<b>Role</b>	<ul style="list-style-type: none"><li>The Registered On-site Wastewater Practitioner (ROWP) utilizes pre-manufactured onsite sewerage components to design and install small and medium capacity onsite in-ground sewerage systems serving residential and commercial structures in rural areas where municipal sewage treatment is not available.</li></ul>
<b>Deliverables</b>	<ul style="list-style-type: none"><li>Documentation detailing the design and installation, and maintenance of an onsite sewerage system.</li><li>Issues and seals a letter of certification that the system has been installed in accordance with standard practice.</li><li>Files the design information and letter of certification with the appropriate health authority.</li></ul>
<b>Act</b>	<ul style="list-style-type: none"><li>Sewerage System Regulation, Public Health Act</li></ul>
<b>QP model operation</b>	<ul style="list-style-type: none"><li>Homeowners and businesses who are not on a municipal sewage system are required to obtain the services of a qualified person to design and install an on-site sewerage system that is appropriate for their needs and situation. A ROWP can provide this service for small and medium sized systems. The ROWP must file a design with the local Health Authority.</li></ul>
<b>Competency</b>	<ul style="list-style-type: none"><li>Training through BC Onsite Sewage Association or Western Canada Onsite Wastewater Management Association</li><li>Practical experience</li><li>Registration with Applied Science Technologists and Technicians of British Columbia</li></ul>
<b>Accountability</b>	<ul style="list-style-type: none"><li>ROWPs are accountable to ASTTBC and subject to their Code of Ethics, complaint review process, and discipline measures</li><li>Regular practitioner audits conducted by ASTTBC.</li><li>Health authorities may review filings.</li><li>Health authorities are required to investigate complaints about the system potentially causing a health hazard.</li><li>Municipalities may have bylaws requiring owners to do regular maintenance of their septic systems.</li></ul>
<b>Guidance</b>	<ul style="list-style-type: none"><li>BC Sewerage System Standard Practice Manual, produced by Ministry of Health</li></ul>
<b>Benefits</b>	<ul style="list-style-type: none"><li>Certification and training leads to good system design and protection of public health.</li><li>Flexibility to design site-specific solutions..</li><li>Fewer provincial resources needed to manage the onsite sewerage program. Previously, permits and inspections were required.</li><li>Less wait time for clients to commission system installation.</li><li>Improved quality of work by sewerage system installers.</li></ul>
<b>Costs</b>	<ul style="list-style-type: none"><li>Costs have been passed along to the consumer – the clients who need a sewerage system.</li><li>Concerns about overly high costs in remote areas where competition is lower.</li><li>Increased liability and administration for ROWPs</li></ul>

## Qualified Environmental Professional

<b>Role</b>	The Qualified Environmental Professional (QEP) helps manage the impact of development on riparian areas by conducting an on-site assessment and making recommendation to the developer.
<b>Deliverables</b>	<ul style="list-style-type: none"><li>An assessment report that defined the streamside protection and enhancement area (SPEA), and the measures that a proponent should follow.</li><li>Certification that no harmful alteration, disruption or destruction of the SPEA will occur from the development.</li></ul>
<b>Act</b>	Fish Protection Act, Riparian Areas Regulation
<b>Operation of the model</b>	The proponent hires the QEP. The QEP submits their report to the RAR Notification System (RARNS) administered by MFLNRO and MOE. RARNS automatically notifies local government, the Province and Fisheries and Oceans Canada (DFO) that a report has been submitted. When a local government receives this notification, they may proceed with their development approval process.
<b>Competency</b>	<ul style="list-style-type: none"><li>A QEP must be a registered professional Biologist, Agrologist, Forester, Geoscientist, Engineer, or Technologist. Additionally, they must have the expertise specified in the Assessment Methods for the type of assessment they are conducting.</li><li>QEP's self-certify that they are qualified to conduct the assessment methodology.</li><li>A training course in the Riparian Areas Regulation is recommended but not mandatory.</li></ul>
<b>Accountability</b>	<ul style="list-style-type: none"><li>QEPs are accountable to their professional organizations, all of which have codes of ethics, complaint and disciplinary processes. If they do not follow the approved methodology and harm occurs, the developer could be charged under the Fisheries Act or Water Act, and they could be vulnerable to civil action from the developer for their professional negligence.</li><li>Government is accountable for ensuring that the assessment methods are adequate to protect fish habitat.</li><li>Developers are responsible for following the recommendation of the QEP to avoid charges under the Fisheries Act or Water Act if harm occurs, or for non-compliance with the municipal bylaw.</li></ul>
<b>Guidance</b>	Provincial government provides guidance to QEPs on assessment methodology, preparation of the assessment report, and revegetation guidelines. The QEP is required to certify that they have followed the assessment methodology.
<b>Benefits</b>	<ul style="list-style-type: none"><li>Government resources are shifted from project review and provision of protection measures to monitoring of results.</li><li>It is a user-pay system.</li><li>Provides certainty, flexibility and timeliness for the developer.</li></ul>
<b>Costs</b>	<ul style="list-style-type: none"><li>Less control over the protection of fish habitat on a site-by-site basis.</li><li>The cost of hiring a QEP can be quite high in some areas.</li><li>Lack of regular oversight of work results in some risk, though no HADD has been noted where monitoring done. HADDS have occurred where no assessment was done.</li></ul>

## **Contaminated Sites Approved Professional**

<b>Role</b>	On non-high-risk contaminated sites, the Approved Professional advises the Ministry of Environment as to whether or not the environmental assessment and remediation of a contaminated site complies with Ministry requirements.
<b>Deliverables</b>	<p>The Approved Professional may recommend the issuance of one or more Ministry Instruments:</p> <ul style="list-style-type: none"><li>• confirming that a site is not contaminated,</li><li>• approval of a plan for remediation,</li><li>• certifying the remediation of a site.</li></ul> <p>The AP may also:</p> <ul style="list-style-type: none"><li>• recommend the release of certain local government permits in support of site redevelopment, or</li><li>• provide comment in the adequacy of ongoing monitoring associated with Ministry instruments.</li></ul>
<b>Act</b>	Environmental Management Act, Contaminated Sites Regulation
<b>Operation of the model</b>	APs are hired by landowners and property developers who require Ministry approvals (instruments) in order to develop or remediate land. APs must be on a roster of APs maintained by MOE. The competency and accountability of APs is maintained by the Contaminated Sites Approved Professionals Society (CSAP), a non-profit organization funded by membership fees, and the application fees paid by clients for ministry instruments. The Ministry of Environment is responsible for the legal and policy framework, issuing instruments, and maintaining a roster of Approved Professionals.
<b>Competency</b>	<ul style="list-style-type: none"><li>• The competency requirements of AP's were originally established by MOE, but are now refined and maintained by the Contaminated Sites Approved Professionals Society.</li><li>• Basic eligibility: Membership in APEGBC, ACPBC, CAB or BCIA, a qualifying degree, 10 years relevant experience, passing levels in Approved Professionals exams, liability insurance.</li></ul>
<b>Accountability</b>	<ul style="list-style-type: none"><li>• CSAP has bylaws outlining performance requirements.</li><li>• One in eight submissions prepared by APs is reviewed by CSAP.</li><li>• Members must submit at least one application for a ministry instrument every three years, and obtain 150 professional development hours over the same period.</li><li>• \$2 million each of professional liability and commercial liability insurance must be maintained. There is also a disciplinary process when complaints are received.</li></ul>
<b>Guidance</b>	<ul style="list-style-type: none"><li>• Ministry of Environment provides regulatory and standards of practice guidance.</li><li>• CSAP provides guidance on AP role and administrative requirements.</li></ul>
<b>Benefits</b>	<ul style="list-style-type: none"><li>• Ministry resources are now focused on review of high-risk sites, and preparation of legislation, policy and guidelines. APs look after 70% of the requests for Ministry instruments.</li><li>• Clients receive Ministry instruments in a timelier manner that if all supporting reports were reviewed by Ministry staff.</li></ul>

- CSAP provides valuable feedback to Ministry, and offers training that Ministry staff may take.
  - Lenders and local governments have assurance that sites are being assessed and remediated by knowledgeable, qualified persons, with oversight by CSAP, and accountabilities both to CSAP and to their parent professional organization.
- Costs**
- Ministry time is required to create policy, legislation and guidance materials.
  - Project proponents bear the costs of hiring the AP, and of any remediation required. Where land values and demand are lower, such as outside of major centres, there may be insufficient return to support remediation and redevelopment of the property.
  - Employers generally bear the cost for an AP to obtain and maintain certification.