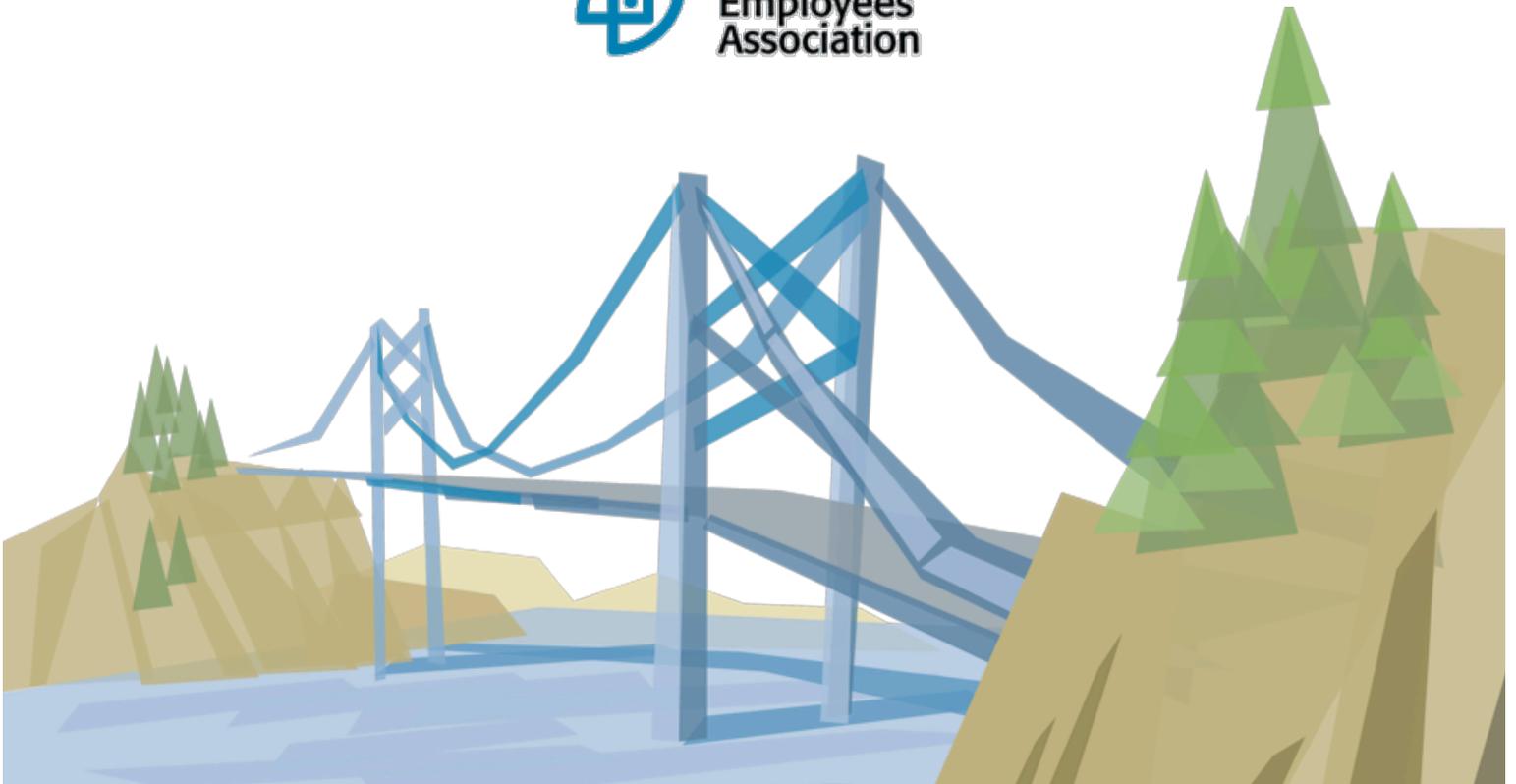


REVIEW AND ASSESSMENT OF THE IMPACTS OF THE PROVINCE OF BRITISH COLUMBIA'S CUTBACKS IN GOVERNMENT LICENSED SCIENCE OFFICERS

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A report by the Professional Employees Association

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Overview

The Professional Employees Association is a labour union representing approximately 2,500 British Columbia professionals in nine chapters. One of its chapters is for Government Licensed Science Officers employed by the provincial government. As of February 2014, this chapter had 1153 members – a decrease of 15 percent since 2009.

[Government Licensed Science Officers](#) include foresters, engineers, agrologists, geoscientists, veterinarians, psychologists, physiotherapists and pharmacists. They provide the provincial government with advice, guidance, research, monitoring and review services to help ensure the efficient and effective management, utilization and oversight of B.C.'s natural resources, infrastructure, food and water resources and some aspects of health care services.

Over the past several years, the number of Government Licensed Science Officers employed by the government has declined sharply due to staff cutbacks and an unwillingness to replace people who retire or resign. Between 2009 and 2014, the number of Government Licensed Science Officers in government service dropped by 15 per cent.

This is an important issue because natural resources are the backbone of the B.C. economy and neglecting their management and monitoring is a threat to the current and future well-being of all British Columbians.

As a result of the reduced number of Government Licensed Science Officers, much of the work they were doing has been cut back, discontinued or contracted out to the private sector. The implications for the people of B.C. could include:

- Loss of resource revenue due to reduced oversight;
- The degradation of forest resources due to inadequate monitoring and inspection;
- Public safety threats if infrastructure like bridges and water supply facilities are not regularly inspected and monitored;
- Threats to the environment if development impacts are not properly assessed;
- Bad decision-making by technical staff due to little or no professional guidance and advice, and;
- Irretrievable loss of ongoing research data due to lack of staff to do the work.

The purpose of this [report](#) is to draw public attention to the implications for all British Columbians of the decline in the number of Government Licensed Science Officers serving their interests and helping protect their natural resources and infrastructure assets. It is not intended to be a definitive study, but rather a snapshot from the perspective of Government Licensed Science Officers themselves to highlight a serious and growing problem.

Declining numbers

Between 2009 and 2014 there was a significant decline in the number of Government Licensed Science Officers employed by the provincial government as illustrated by the following table:

	2009	2014	% decline	% increase
Foresters	722	529	27	-
Agrologists	190	147	23	-
Geoscientists	49	44	10	-
Engineers	232	216	7	-
Psychologists	60	57	5	-
Veterinarians	16	11	31	-
Pharmacists	16	20	-	25
Physiotherapists	3	4	-	33
Other	71	125	-	76
Total	1,359	1,153	15	-

- Data sourced from BC Government Union-Check Off Lists provided to the Professional Employees Association.
- The “Licensed Science Officer – Other” category may include small numbers of foresters and agrologists, but they do not make up for the losses in the forester and agrologist categories.

The broader implications of the declining number of Government Licensed Science Officers

- **The degradation of forest resources due to inadequate monitoring and inspection.**

A [report](#) by the B.C. Auditor General in February 2012 concluded that the Ministry of Forests, Lands and Natural Resource Operations did not have the capacity to gather enough information to know what’s happening on the ground in B.C.’s forests.

The report noted that the province’s forests contribute to employment, tourism and recreational opportunities, and generate significant revenue for government to finance public services. But current forest management practices that allow private companies to hire forest professionals to oversee and report on their activities are questionable. Forest companies must submit forest stewardship plans to Government to harvest timber. These plans stipulate how the companies will address reforestation and other values. With legislative changes in 2004, these plans are now developed by private sector companies with only minimal oversight from Government Licensed Science Officers.

“We found ministry reports pointing to concerns within individual components of the oversight framework, particularly in the areas of forest stewardship plans, compliance and enforcement and effectiveness evaluations.

“We found two reports that reviewed the utility of forest stewardship plans, both of which identified a number of weaknesses in the plans. A Forest Practices Board report looking at the initial plans found that they generally stated vague and non-measurable commitments that could restrict the ministry’s ability to enforce or hold licensees

accountable.

“Similarly, in 2009 the ministry evaluated a sample of forest stewardship plans to determine what the plan holders intended to achieve in relation to their restocking obligations. It determined that the plans proposed few innovations in forest practices, as they were generally very similar to the default standards provided by the ministry. The findings of our own review of 15 recent forest stewardship plans were similar to those in these two reports.”

The AG’s report also noted that a key component of the timber supply review is assessing the forest inventory, which involves identifying the vegetation and land-based attributes of a timber supply area. This includes aerial imagery and ground sampling to ensure that the ministry has sufficient information to support well-informed decisions.

“We found cases where the ministry lacks the information needed to accurately categorize the attributes of a forested area. In particular, the ministry has limited information on areas affected by pests, diseases, wildfires and other natural disturbances. This is because only small portions of the affected areas are ground surveyed to the extent needed to inform decision-making and assist in timber supply reviews.”

The AG concluded that the ministry’s reliance on industry to update forest inventory information was not working properly because reports required modification when mapping or silviculture data was missing or did not meet the ministry data quality specifications.

“The effect of these deficiencies is that until these records are corrected, they will not be used to update the forest cover inventory, limiting the completeness of the information and its overall usefulness for monitoring and decision-making purposes. Again, this means the Chief Forester has to try to estimate the effect of the disturbances rather than rely on a more valid, updated inventory.”

The AG also found that the government relies on forest professionals hired by industry to make stewardship recommendations to government. But internal ministry reports indicated concerns with this practice, particularly with forest stewardship, compliance and enforcement and effectiveness evaluations.

This lack of proper stewardship has significant financial implications for British Columbians. The government takes in half a billion dollars annually from forestry and this revenue pays for public services. In addition, our forest product exports are worth close to \$10 billion annually and the total value of BC’s timber supply is estimated to be a quarter of a trillion dollars. It makes sense to invest in the proper science to maintain this revenue stream and the biodiversity to make it sustainable.

- **A threat to public safety if infrastructure including bridges and water supply facilities are not regularly inspected and monitored.**

Bridge overload assessment: Government Engineers assess requests for industry vehicles to

cross Ministry of Transport (MoT) bridges. Often, these vehicles are carrying heavy equipment such as hydroelectric transformers and machinery for the oil and gas, mining and construction industries. The extraordinary weight of these vehicles means the loads must be assessed to ensure that it's safe for them to use public bridges. Overload requests have increased from 11 in 1989 to an estimated 1,000 in 2012. Five different consulting companies have been retained to evaluate overload requests. They were paid approximately \$3.1-million in 2012 at an hourly rate well above what the government paid its own engineers before the work was outsourced.

Unsafe resource bridges: In a report just released, the Forest Practices Board looked at bridges built on resource roads in B.C. since January 2010. The Forest Practices Board is B.C.'s independent watchdog for sound forest and range practices, reporting its findings and recommendations directly to the public and government. The special investigation focused on safety, protection of the environment and planning. Of the 216 bridges examined, 19 were not safe and another 13 were flagged because of serious safety concerns. Only 60 per cent of the 213 bridges inspected had complete plans and on 73 there was no sign-off by a professional engineer to verify that they were planned and built properly. The government has outsourced responsibility for sign-off and safety of B.C. resource bridges to independent companies.

“This report is a wake-up call to those who are not complying with the law or the professional practice guidelines. Due to the potentially significant consequences, there are no corners to cut when it comes to bridge design, planning and construction. The public and government expect and deserve high safety, environmental and professional standards, but those standards are not currently being met.”

- **Threats to the environment if development impacts are not properly assessed.**

Overseeing hydroelectric projects: Environmental and engineering professionals ensure that potential environmental impacts are properly managed in the construction and operation of hydroelectric projects. Historically, this work was done by Government Licensed Science Officers. However, changes in the regulatory approach in the past decade allow the licensees to hire consultants to monitor the construction. Reduction in the number of Government Licensed Science Officers over the same period has forced the government to rely heavily on outside consultants to ensure regulatory compliance. The effectiveness varies with the individual consultant's understanding of government and public interests. This also raises the possibility of a conflict of interest and undermines public confidence in the process.

- **Bad decision-making by technical staff due to little or no guidance and advice.**

Reviewing reports of external Professional: In the past decade, many technical reports used as the basis for regulatory decisions have been prepared by external consultants and paid for by the regulated parties. The technical content of many of these reports may not have been critically reviewed in detail by experienced and knowledgeable Government Licensed Science Officers. In fact, a significant number of the reports that were reviewed included conclusions that were inappropriate due to incorrect or biased analyses. It is difficult to establish the cause of these errors. They may have been due to resource constraints (time and budget) or may have been deliberate due to a conflict of interest. Had they not been identified and corrected, many of these errors would have resulted in regulatory decisions that favored the regulated party and

adversely impacted the environment. Without a sufficient number of experienced and knowledgeable Government Licensed Science Officers to critically review consultant reports, the management and use of B.C.'s natural resources could be compromised.

- **Irretrievable loss of ongoing research data due to lack of staff to do the work.**

Gathering data is essential to accurate long-term planning: The efficient and sustainable use of B.C.'s natural resources depends on careful and accurate planning. In the forest sector in particular, data gathered on the ground by Government Licensed Science Officers in years past provided the basis for timber resource management, the control of pests and the health of the forests. The reduction in the number of Government Licensed Science Officers means much of that data is no longer being collected, leaving big gaps in long-term trend analysis that government is now trying to plug by what amounts to guess work based on aerial imaging of some – but not all – forest lands.

- **Loss of public confidence in the overview and assessment process if private sector proponents of resource development projects are not independently monitored.**

The development of the LNG sector needs more, not fewer Government Licensed Science Officers: B.C. is on the verge of what the government believes will be some of the biggest natural resource development projects the province has ever seen. They could be worth hundreds of billions of dollars over the next few decades. While these projects have the potential for significant benefit for British Columbians, they could become major liabilities if oversight, regulation and stewardship are left almost exclusively to the proponents and their own consultants. Now more than ever, B.C. needs Government Licensed Science Officers to ensure that the LNG sector is developed in a way that provides the maximum possible protection to the environment and is in line with the needs and wishes of the communities in the north.

Conclusion

Government Licensed Science Officers are professionally trained and accredited experts and scientists. They are the first-line stewards of B.C.'s natural resources and primary protectors of the safety of public infrastructure facilities. The PEA believes there are now not enough experts working for the province to adequately look after the interests of British Columbians - and the situation is getting worse.