Executive Summary

In January 2013, a Steering Committee was formed comprising representatives of local government, the Union of British Columbia Municipalities and the Province, to examine the issues surrounding the introduction of a uniform, province-wide Call Answer Levy to support and improve 9-1-1 services in British Columbia. This background paper was commissioned by the UBCM in support of the Steering Committee's work. The paper examines how 9-1-1 services currently are delivered in the province, reviews call answer levy legislation and the operation of 9-1-1 services in other jurisdictions, and sets out a framework of the options and issues facing the introduction of a call answer levy in British Columbia.

9-1-1 services are an integral part of the province's emergency communications system. They are a front-end gating mechanism which connects the public to the correct emergency service dispatch agency. There are 12 Public Safety Answering Points which operate under local government authority and provide 9-1-1 services to most of the province.

The operation of 9-1-1 services, indeed, of all aspects of the emergency dispatch and communications system, is time-impacted and often life-critical. The system itself is inter-dependent and may be viewed as a continuum commencing from when a member of the public places a call to 9-1-1, where the call is assessed by the 9-1-1 operator and transferred to the relevant emergency dispatch agency, to the dispatch of emergency services and the operation of those services at the incident itself. A failure or delay at any point in this continuum will potentially affect how the entire system operates. Such failures or delays may increase the risk to life of both the public and emergency responders, or result in increased damage to property. Consequently, the entire system, from 9-1-1 services through to dispatch and the emergency radio system, needs to be resilient. It must operate to recognized standards, be adequately housed and staffed with properly trained personnel, and supported by carefully considered programs and processes for quality assurance/quality improvement, centre back-up and business continuity.

Research was conducted on the operation of the existing 9-1-1 system in British Columbia, and on the operation of similar systems in other jurisdictions, with a focus on Canadian provinces where provincial Call Answer Levies have been introduced. The B.C. research included two surveys: one for local governments which were responsible for providing 9-1-1 services; and the other to the 12 Public Safety Answering Points which actually operate the service. In addition, follow up telephone interviews and email exchanges were conducted with local government, RCMP and PSAP[1] personnel, all of whom willingly and generously assisted in providing data, information and insight.

9-1-1 Services in British Columbia

The existing 9-1-1 system has developed organically since its inception in the 1980s. Responsibility for the service lies with local government. Typically, this responsibility is met at

[1] **A list of acronyms used is set out in Appendix A. Capitalized terms and acronyms used in the Executive Summary are defined in the body of the paper when they are first used**.

the regional district level, though a number of municipalities either contract for, or directly provide the service as well. As technology has developed and improved, a number of local governments have banded together to coordinate the delivery of the service through a single centre. With current technologies, 9-1-1 services can be provided safely and effectively from distant locations.

9-1-1 services are available in most areas of the province, but there are still some unserviced areas and some coverage gaps. Two regional districts – the Northern Rockies Regional Municipality and Central Coast Regional District – and one provincially governed region (the Stikine Region), lack any 9-1-1 service. Additionally, there is no 9-1-1 service in Skeena-Queen Charlotte Regional District outside of the City of Prince Rupert and District of Port Edward. Seven other regional districts reported coverage gaps, either in some electoral areas or on some First Nations reserves. As part of the move to a uniform, province-wide Call Answer Levy, it will be necessary to address the 9-1-1 service coverage gaps, which may involve some financial assistance for the unserved areas. More detailed investigation of coverage gaps also will be required, to assess the cost of service expansion and confirm the areas which still lack service.

The existing 9-1-1 system manages between 1.5 and 1.6 million calls annually. The cost of operating the existing system is in the range of $12-13 million per year. All of the PSAPs have sought to address business continuity issues: every PSAP has back up and alternate power supplies for critical systems; 11 of 12 have designated fail-over centres and most of the PSAPs have back-up sites for their operations. Only half of the PSAPs, however, were able to confirm that their infrastructure was built to current post-disaster standards.

The 9-1-1 system faces various challenges. In addition to the coverage gaps noted above, the system is also struggling to deal with “Abandoned Calls”. These calls, which almost exclusively come from mobile phones, place significant strain on PSAP, dispatcher and police resources. In some jurisdictions, nearly a quarter of the calls for service for police involve follow-up on abandoned 9-1-1 calls. A formal study of the issue needs to be undertaken and a province-wide policy adopted on how such calls are treated, from PSAP through to police response. The issue also highlights the need for an effective, province-wide educational program aimed at the public, to reduce the number of “pocket dials” received by PSAPs.

The most significant development for 9-1-1 and dispatch services is the imminent advent of Next Generation 9-1-1. NG911 will involve moving PSAPs and Secondary Safety Answering Points to internet-protocol based systems. It will allow emergency communication centres to accept a broader range of connections and data sources – including text, video and pictures. Moving to NG911 will involve a substantive transformation of the existing systems used by emergency communication centres in the province, and will entail technological, operational, economic and institutional change. The system and equipment architecture for NG911 are still being developed, debated and reviewed. However, transitioning to the new systems will be a costly undertaking, in terms of capital investment as well as staffing and training issues. A “precursor” to NG911 is already on the horizon as the CRTC has mandated that carriers must

enable text connections to 9-1-1 services for the deaf, hard of hearing and speech impaired, by 2014.

The review showed that larger PSAPs tended to be more cost-efficient when measured on a "per-call" or per capita basis. Larger centres enjoy economies of scale which are significant. Cost efficient operation of the emergency communications system is important, to ensure that limited budgets are well invested. This reality, however, should not be viewed as a criticism of the existing system, given that it developed organically over the past 30 or so years. Indeed, local governments have worked hard to combine the delivery of the services in most areas of the province, as the technology enabling them to do so has become available. British Columbia compares well to most Canadian jurisdictions: given its geographic size and population, it already has a reasonably efficient PSAP footprint. On a *per capita* basis, Québec has nearly 60% more PSAPs, while Alberta has more than twice the number of that in British Columbia. The numbers are even more significant when compared to the Maritime Provinces and Ontario.[2] Improved efficiencies should still be encouraged, however, as it ensures that monies can be invested in improving the operation and resilience of the system, and enhancing service to the public.

9-1-1 Services and Call Answer Levies in Other Jurisdictions

A significant part of this review involved research into the operation of 9-1-1 systems and Call Answer Levy regimes in other Canadian provinces. Six other Canadian provinces have established, or are introducing, a province-wide CAL: Alberta, Saskatchewan, Québec, New Brunswick, Prince Edward Island and Nova Scotia. In five of those provinces, the CAL applies to all devices which can connect to 9-1-1 services; only Alberta has introduced a CAL which is limited to wireless devices. Each Canadian jurisdiction which has introduced a CAL has also either established procedures, guidelines and operational requirements for PSAPs, or has created a process for establishing them. Four of the six provinces also have introduced liability exemptions covering the operation of PSAPs.

The Maritime Provinces and Saskatchewan fundamentally approach 9-1-1 services as a provincial responsibility (even though service delivery everywhere but Prince Edward Island generally remains with local governments). In Québec and Alberta, 9-1-1 service delivery remains the responsibility of local governments – though Québec has taken the step of requiring that local governments make the service available (either directly or by contract) in most areas of the province.

In the Québec system, the provincial government set detailed requirements for PSAPs, ranging from location and infrastructure, to operational requirements, procedures and quality assurance processes. The allocation of funding from the CAL, however, rests with an agency which is operated by local government. That same agency is responsible for reviewing PSAP operations. In essence, though the province established the requirements, it gave control and

[2] The number of PSAPs in Ontario is not reported. An email from Inspector Paulo DaSilva of the York Regional Police, who responded to an information request placed to the Ontario 9-1-1 Advisory Board, indicated that there are "over 100" PSAPs in Ontario. Email from Insp. P. DaSilva, 8 July 2013.

oversight of the system to local government, which remains responsible for actual service delivery. An interesting feature of the Québec system, moreover, is that it strictly limits the amount of the funding available for "administration": a maximum of 3% of the CAL funds can be spent by the responsible agency for its administrative overheads.

Other provinces (notably Saskatchewan, New Brunswick and Nova Scotia) have established committees comprising various stakeholders, including representatives of local government and PSAPs, and emergency services personnel, to develop and implement consistent policies, procedures and standards for their 9-1-1 services. In Alberta, which is in the process of introducing a new CAL and attendant standardized requirements for PSAPs, the principal responsibility lies with the Alberta Emergency Management Agency. The AEMA is seeking to coordinate policy development with local governments and PSAPs.

In four of the six Canadian jurisdictions, the permitted use of CAL funds is broader than a narrowly conceived view of 9-1-1 services. Nova Scotia, among other things, funds its poison control centre using CAL monies. New Brunswick recently broadened its definition of allowable expenditures to include the "coordination of emergency services" in the province, while Saskatchewan uses about half of the CAL funding to subsidize the connection of local government and provincial agencies (including fire departments and municipal workers) to the province's emergency radio network. Québec utilizes a set allocation formula for distributing CAL funds to (or at the direction of) local governments. It does not actually limit or prescribe how those funds must be spent, though in practice, 96% of the funds are distributed directly to PSAPs.

Two other jurisdictions also were examined: Manitoba and the State of Kentucky. Manitoba has not introduced a provincial CAL. However, it has adopted a centralized approach to the establishment of standards governing PSAP operations and established a wide-ranging liability exemption for PSAP operations. The State of Kentucky, conversely, epitomizes the decentralized approach. With an area only one-third that of British Columbia and a smaller population, Kentucky supports 109 certified PSAPs, and more than 80 uncertified PSAPs, which are not tracked by any state agency. PSAP operation is a local government responsibility and is principally funded through a combination of landline CALs and property taxes. The state also has established a wireless CAL, which it uses to subsidize certified PSAPs and to regulate how those PSAPs manage wireless 9-1-1 calls. It is probably not surprising that the system suffers from significant efficiency issues and many local governments are struggling with funding problems.

Issues and Options for a Province-wide CAL in British Columbia

As a starting point it should be noted that this background paper assumes that a CAL will be imposed on all devices which connect to 9-1-1 services (including landline, wireless and Voice over IP). The CAL will be set at a uniform level and will be province-wide. The principal function of the CAL will be to fund 9-1-1 services, though the introduction of the new system should not result in any local government losing any amount of existing revenue which it currently raises from a landline (or, in the case of Prince Rupert, landline and wireless) CAL. In

other words, the CAL should provide at least the same existing level of funding to such jurisdictions.

Establishment of a CAL and related structures and processes, will involve senior legislation and related regulations. The legislation and regulations will need to address a range of issues, which are set out in greater detail in the body of the paper (including the scope of the CAL, liability issues, collection issues, processes etc.). In general, however, the three principal, interrelated issues which need to be addressed are: the allowable scope of expenditure of funds raised from the CAL; the method or process by which those funds will be managed and allocated; and the extent to which (and process by which) common standards and requirements for PSAP operations will be developed and implemented.

The paper does not seek to prejudge the appropriate scope for the application of CAL funds. That is a policy issue for local governments and the province, though a range of matters are identified which could be included as "in scope", on both a narrow conception of 9-1-1 services and a broader approach to the use of the funds. Simply put, however, the broader the scope of the CAL – the more elements of the emergency communications system that will be funded, in whole or in part, by this levy – the more complex the allocation process and the more complex the oversight and management of the system will become.

Certain issues or principles did emerge from discussion both with stakeholders during the research process, and through the review of an initial draft of the paper with the Steering Committee:

1. The CAL funding should only be applied to specific, agreed purposes, which should be clearly defined in the senior legislation;
2. The principle use of the funding will be "9-1-1 services";
3. Control over the allocation of CAL funding should remain with local governments;
4. The allocation process will likely involve both a metrics-driven formula and some form of grants process;
5. The allocation process will need to take into account existing funding and cost structures of local governments;
6. Any administration costs related to the oversight of the system (i.e., to manage the allocation process and any similar functions) should be strictly limited; and
7. Any standards or procedures which are established should be created through a consensus process involving relevant stakeholders – the costs of developing, implementing and meeting those standards must be factored into the CAL funding formula.

Finally, the legislation will also need to address the quantum of the administration fee which telecommunication companies will be permitted to charge for collecting and remitting the CAL. As a matter of principle, this fee should be set at a rate that is no more than the actual cost of collection. With a uniform levy across all devices, and a single point of remittance for CAL funds, the administration fee should be nominal, and certainly far less than the $0.07 currently charged for the collection of landline CALs.