

Emergency Accessibility Standards Report

*Ensuring the Safety of Deaf, Deaf-Blind and
Hard of Hearing Canadians during
Disasters and Emergencies*



Declaration of Conflict of Interest

The following are acknowledgements of other committees or organisations the members sit on. It does not necessarily claim a Declaration of a Conflict of Interest. All members have been informed they will be financially compensated for expenses incurred along with an honorarium of an unknown amount.

Lisa Anderson: *DWCC. While DWCC's findings and work is included in this report, I declare that DWCC does not seek financial compensation for information provided to the Standards Committee nor do I seek to benefit financially from the outcome of the report. While I am a member of DWCC, and on the Board of Directors of the Broadcasting Accessibility Fund (BAF), I state that there is, to my knowledge, no conflict of interest. All information provided is factual and based on the overall lived experience of the Deaf, Deaf-Blind and Hard of Hearing in Canada.*

Kimberly Wood: *CDGM. I declare that CDGM does not seek financial compensation for services provided to the Standards Committee. I state that to my knowledge, no conflict of interest has been perceived nor do I seek to benefit financially from the outcome of the report. CDGM resources were freely used by the Committee in community outreach and to help manage the technical support for the town halls.*

Travis Morgan: *OAD, CDGM. I declare that neither CDGM or OAD seek financial compensation for services provided to the Standards Committee. My services to the committee did not use OAD resources, nor did I act as a representative of OAD at any given time while carrying out my duties associated with the Committee. I state that, to my knowledge, no conflict of interest has been perceived nor do I seek to benefit financially from the outcome of the report.*

Jeffery Beatty: *DWCC. I declare that DWCC does not seek financial compensation for information provided to the Standards Committee. I sit on the CRTC Emergency Services Working Group (ESWG) that works with the CISC on technical issues in relation to 9-1-1. I state that to my knowledge no conflict of interest has been perceived nor do I seek to benefit financially from the outcome of the report.*

Darryl Hackett: *I am a federal government employee, and with this I state that I am participating in this committee as a Deaf community member with lived experience and expertise. I am a member of the executive of the DWCC, however, as Lisa has already mentioned, DWCC is not to benefit from information shared in this report, thus, I declare that I have, to my knowledge, no conflict of interest, nor do I seek to benefit financially from the outcome of the report.*

Foreword **with Acknowledgements**

We want to acknowledge and thank CAD-ASC for their efforts in organising this study made possible with the funding and resources provided by Accessibility Standards Canada¹.

Thanks to Jeffrey for enduring hours of sitting through our meetings to ensure we were kept up to date on technical information, Darryl for his widespread knowledge on transportation and ensuring the Maritimes' concerns were represented. Thanks to Travis for his humour and political insights which were helpful. Thanks to Lisa for her efforts to transfer the information to powerpoint and video and Kim in organising the outreach and getting the word out. Gratitude and appreciation goes to the Canadian Deaf Grassroots Movement (CDGM) team that worked hard with the technical aspects behind the camera of the Zoom town hall meetings. Thank you to Anna for putting together the final video pre-recorded presentation and our amazing team of interpreters for their immense patience as we condensed hours of video, text and research data into this short presentation.

Our committee is composed of experts from technology, community outreach, mental health, and travel. There were discussions among the committee where members shared their experiences on ferries, planes, evacuations, bomb threats, lockdowns, and community alerts of rampages. The experiences shared were profound and the differences found in different provinces of Canada were upsetting as we found that Deaf people in Ontario were often warned of crises, while British Columbians were left in the dark.

It was challenging to get the information together because of our time zone differences, as well as a disaster that slowed down our work but we found it so helpful because it made us personally experience the stress Deaf people go through in a natural disaster. Much of the information collected was in real time and we do not think that our research would have been so insightful and in depth without the mudslides that trapped us in Vancouver and cut us off from the rest of Canada.

- Lisa Anderson and Kimberly Wood, Co-Chairs

Note: this paper was co-authored by the five Standards committee members, and due credit is appreciated and expected with direct quotes from this paper, with reference to paragraph number and page numbers, to be integrated in the cumulative report which the CAD-ASC will supply to Accessibility Standards Canada. The Standards Committee permits the CAD-ASC to use the report in its Appendix.

¹ Accessibility Standards Canada - [link](#)

Preface

This report was prepared by the following members of the pan-Canadian Accessible Canadian Emergency Standards (ACES) Committee; Lisa Anderson (Victoria), Jeffery Beatty (Ottawa); Darryl Hackett (Ottawa); Travis Morgan (Greater Sudbury) and Kimberly Wood (Greater Vancouver).

The Emergency Accessibility Standards study was commissioned by the Canadian Association of the Deaf (CAD-ASC) to determine if Canada was keeping abreast of technological advancements to ensure accessibility for the Deaf in the event of a disaster. Recent events such as the mudslides in British Columbia highlighted that while the technology is there, the usage of said technology by the government was not noticed. While the mandate of the committee was Federal, it was felt that comparisons should be made with the provincial level of government for any improvements that could be made at the Federal level.

It is a frightening experience to be cut off from the world, from society and unable to collect information about what is happening. Individuals with hearing have the ability to access radios and communicate without barriers during a disaster, so at least some information can be sent in audio form. Deaf people however are heavily dependent on technology to remove the barriers that exist for their population. This can make a disaster relief effort more complicated and it is the purpose of this study to reduce issues that may arise during an emergency event.

The Standards Committee decided on categorising five areas of study that it was felt that would be needed to explore to ensure accessibility in times of emergency. They are as follows; Communications & Information, Disaster & Emergency Preparedness, Transportation, Procurement Goods & Employment, and Built Environments. Communication and Information along with Procurements, Goods and Employments. The categories were broken into further subsections during the town halls for ease of information collecting.

The challenge faced by the committee was diverse ranging from technological challenges, time zone issues, communication barriers as the discussions were held across four different languages with regional dialects and educational standards differing across the nation along with other commitments the committee members had and a province-wide disaster that isolated the chairs from outside communications during the course of the study. While this disaster was detrimental to the timely development of the study, it provided the committee with a personal, real time insight into government responses and the level of accessibility it had.

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Acronym Reference Sheet

ASL	<i>American Sign Language</i>	BAF	<i>Broadcasting Accessibility Fund</i>
LSQ	<i>Quebec Sign Language or Langue des Signes du Québec</i>	CWTA	<i>Canadian Wireless Telecommunications Association</i>
DDBHH	Deaf, Deaf-Blind, Hard of Hearing	CRTC	<i>Canadian Radio-television Telecommunications Commission</i>
CAD-ASC	<i>Canadian Association of the Deaf - Association des Sourds du Canada</i>	ESWG	<i>Emergency Services Working Group</i>
OAD	Ontario Association of the Deaf	CISC	<i>CRTC Interconnection Standards Committee</i>
CDGM	<i>Canadian Deaf Grassroot Movement</i>	PGSE	<i>Procurements, Goods, Services, Employment</i>
DWCC	<i>Deaf Wireless Canada Consultative Committee</i>	SMS	<i>Short Message Service</i>
TTYs	<i>Teletypewriter</i>	CASLI	<i>Canadian Association of Sign Language Interpreters</i>

Introduction

The Standards Committee hosted 4 virtual town hall sessions to provide factual information on services provided and collect feedback as well as perspectives and stories from Deaf individuals who attended. The sessions were informal with pre-recorded videos, which admittedly had issues as a result of editing but was felt to be far more reliable than the committee members attending and hoping for a stable internet connection at the time. The considerable time differences also made it challenging for Committee members to be in attendance for all four town halls.

The atmosphere of these townhalls was casual to encourage a variety of different opinions and feedback and the four town halls kept the pool of attendances per night small to further enhance the casual atmosphere. The powerpoint slides were bilingual, in English and French, and two of the four sessions were fully accessible in all four languages in ASL and LSQ including tactile ASL for those who requested. COVID policies were followed for those tactile ASL requests. The Standards Committee is proud of the efforts to be as accessible as possible for those in attendance of these town halls, to make it easier for those on tablets, low vision, low language proficiency, ASL and LSQ users, and providing slides in both Official languages of English and French.

The Standards committee would like to thank all that were in attendance at the town halls, the 41 attendees from the West, Central, Eastern and Atlantic townhalls. All of the participants' insight, personal experiences and perspectives were valuable. The two town halls that provided the greatest insight into emergency accessibility standards were the West and the Atlantic which had major natural disasters and manmade crises.

As the town halls were broken into five major sections, considerable time was spent on technology and preparedness. It should be noted that the other three major sections were not dismissed or received less attention intentionally. For ease of information gathering, the town halls were broken into eight sections, with seven focused on information and the final section for feedback. It was stressed that the Committee's mandate is only on emergencies. This format provided some challenges in staying within the mandate while providing an accurate representation of concerns to the CAD-ASC.

The format of the paper is to provide information and background under each section, provide real life examples gathered and used in the town hall presentation, and a collection of perspectives from town hall attendees. An overview of issues was covered then recommendations. This paper will be wrapped up with our overall recommendations clearly outlined. Please note that for the purpose of the paper, disasters, emergencies and crises have the same broad definition; an event requiring urgent attention.

A. Communications and Information

Presented by Lisa Anderson and Jeffrey Beatty

1. Background Information

1. The way that Deaf, Deaf-Blind and Hard of hearing obtain information from the world that we all exist in, compared to the hearing, differs. Incidental learning, as defined as “learning that is not premeditated, deliberate, or intentional and that is acquired as a result of some other, possibly unrelated, mental activity. Some theorists believe that much learning takes place without any intention to learn, occurring incidentally to other cognitive processing of information. Also called non intentional learning.”² Further definitions are also available with the UNESCO Glossary page.³
2. Additionally, incidental and informal learning impacts DDBHH Canadians because we constantly miss the information around us. As a result, information is not always freely shared with us. This means DDBHH tend to miss the important information, while hearing people can hear, access and learn information constantly, 24 hours, 7 days a week simply because they can overhear other people’s conversation.
3. An example of this is when someone is standing in the line in a coffee shop, and one can learn so much by overhearing conversations in the coffee shop. While hearing people have the advantage of this incidental learning, Deaf people are standing in the same coffeeshop in silence and just scanning the room visually, oblivious to what is being discussed in the room, often left out of critical everyday information. DDBHH Canadians walk around in life in silence or can hear unidentified sounds and therefore receive and perceive information differently and instead of auditorily, they perceive the world visually.
4. Providing another specific situational example, hearing people can sit in their cars, and while they are driving, listen to the radio and be even miniscule ahead in current events than those who are Deaf. DDBHH people cannot hear the radio and they often miss important information. Deaf people need to make more of a concentrated effort to obtain information and to learn current events, by reading the internet, social media, and watching TV.
5. The federal government must be mindful of incidental learning and how Deaf, Deaf-Blind and hard of hearing Canadians are often behind in information and the challenges of communications while considering its accessibility standards with emergencies in natural disaster situations and manmade crises. Thus, an overview of information and communication with technology is covered in the section below.

² APA Dictionary of Psychology - <https://dictionary.apa.org/incidental-learning>

³ UNESCO Glossary - <https://unevoc.unesco.org/home/TVETipedia+Glossary/filt=all/id=675>

Information and Communication with Technology

6. This section focuses on the technology and method of communications the Canadian government has as tools to employ to reach out to the Canadian population at large. There will be an overview of existing tools which are accessible, or not, to the Deaf, Deaf-Blind and Hard of hearing Canadians.
7. In Canada, there are several accessible wireless emergency services available. In our Deaf community, we are fortunate to have a committee, the Deaf Wireless Canada Consultative Committee (DWCC)⁴ that has a mandate resting entirely on wireless accessibility issues. It should be noted that members of the DWCC also sit on this committee. It was not felt as a conflict of interest, but as a contributing resource for enhancing data collection. DWCC has a mandate that includes advocating accessible wireless emergency services with direct text to 911 and emergency alerts.
8. The DWCC is a team of consultants involved in consultative roles with public regulatory processes with the Canadian Radio-television and Telecommunications Commission (CRTC). It has conducted both quantitative and qualitative research surveys relating to wireless and telecommunications accessibility in collaboration with the CAD-ASC. DWCC is involved with accessibility committees in the wireless industry including with the Canadian Wireless Telecommunications Association (CWTA) which is responsible for maintaining the textwith911.ca website and hosts the wirelessaccessibility.ca website.
9. In Canada, there are three wireless emergency tools available: Wireless Public Alerts (WPA) provided by Alert Ready, Text with 9-1-1(T-911) and Real-Time Text 9-1-1 will soon be available for all to use. It should be noted that some provinces such as Ontario have already incorporated aspects of these technologies.

Technology and Disasters

10. How does the government tell the Deaf about disasters and preparation, if no technology, what to do? In the old times, the days before cell phones and the Internet, the Deaf could only get news from other people, neighbours, friends or family or sign language interpreters, or the papers. Today, currently we have a number of options, we have TV with news, Internet, videos and apps which includes information coming from Twitter. DDBHH Canadians become more dependent on social media technology to know what is happening around us.
11. Here there will be a description of these three wireless emergency tools in further detail, beginning with the WPA provided by Alert Ready.

Alert Ready and Wireless Public Alerts

⁴ Deaf Wireless Canada Consultative Committee - <https://www.deafwireless.ca>

12. Alert Ready is “Canada’s emergency alerting system. Alert Ready delivers critical and potentially life-saving alerts to Canadians through television, radio and LTE-connected and compatible wireless devices.”⁵ This Alert Ready information is distributed to: radios, cell phones, and televisions.
13. These alerts are used most commonly for Amber alerts, but are increasingly being deployed for severe and extreme threats, manmade and natural disasters, for example, active shootings, or tornado warnings.
14. The government’s method of reaching out when power outages have occurred is through a radio broadcast or through internet broadcasting. While informative and helpful, radio broadcasts do not reach out to the Deaf without an interpreter nearby. Internet broadcasts are rarely accessible at an acceptable level of quality. Subtitles are often auto-generated, and interpreter videos aren’t included. WPA is text based and can include steps and links to accessible websites with information made readily available for those dependent on ASL/LSQ.
15. The challenge with the Alert Ready is it appears to be working in patchwork fashion, there is no standardised use of it in all regions and provinces.

Inconsistent Alerting

16. The federal and provincial governments need to get aligned on emergency alerting systems, as it is currently erratic. Most notably in the province of British Columbia, where in the year 2021 alone, residents, including those who are DDBHH, dealt with a heat dome, forest fires, and torrential rain storms that caused severe flooding situations, experienced a dichotomous situation, as “the last people to know,” with what was going on. Deaf people were frustrated even with their mobile devices.
17. There is a provincial and federal jurisdiction contradiction over such critical technology. While Wireless Public Alerts (WPA) were made available on the federal government level, the provincial government chose to direct people to go to “DriveBC” website, while this is well-intentioned, it had the opposite effect and caused a lot of confusion and turmoil for those trying to survive in the midst of these crises. It was simply not accessible, and left out thousands of Deaf people in the Fraser Valley at a disadvantage and those travelling to and from the Fraser Valley farm and ranchlands region.
18. In the *Barrier-Free Emergency Communication Access and Alerting System Research Report, 2018 (Russell, McLaughlin, Demko)* also found “there are inconsistent municipal, provincial and federal policies for the provision of communication access for Deaf, hard of hearing, and Deafblind citizens.”⁶

⁵ Alert Ready - <https://www.alertready.ca>

⁶ Barrier-Free Emergency Communication Access and Alerting System Research Report - [link](#)

19. Further the authors described the challenges with further information: “It is interesting to note, that while the CRTC is responsible for the regulation and supervision of broadcasting and telecommunications, they are not responsible for emergency alerts.”⁷ The Standards team went digging and found that the National Public Alerting System (NPAS) is managed through Public Safety Canada.⁸ However, issues still exist, with alerts only being put into effect in certain provinces and not in others, leaving thousands of DDBHH in that specific province left behind and feeling unsafe.

20. Quite simply, in sum, if you are DDBHH and live in Ontario, Deaf community members feel rest assured that they will be notified of emergencies with the alerts, while those in British Columbia feel they are not safe because they don't receive these alerts.

21. The emergency standards committee has several real-life situations that involve wireless alerts. In British Columbia, in the midst of disasters, truthfully Deaf people are left to their own resources without alerts to know what is going on, often having to ask the people around them what is happening. This is not equal accessibility.

No Technology, No Internet What to do?

22. What happens if there is no technology or internet access? Using a specific disaster, the Standards Committee uses the BC Flood situation in Fall 2021. A gentleman who is Deaf, a resident of mainland greater Vancouver region, returning from the Okanagan, found himself stranded in Hope, the highways were blocked due to the valley flooded from heavy rainfall. Mr. John Warren chronicled his experiences in a series of Facebook posts⁹ vlogs¹⁰ and youtube videos¹¹ narrating how he survived through the floods and was able to get out of Hope a few days later.

23. Mobile cellular towers were down without power, and without a generator, there was no opportunity to send wireless waves that send connections to cellphones and smartphones, so this Deaf man could obtain more information. Mr. Warren could not rely on technology or communication, and while everyone was gravitating toward one central coffee shop, the caveat was that the coffee shop had limited hours. Electricity was out, so he could not use the hotel for the plug to charge his phone, he had to drive around to use his car to charge his phone, etc. Mr. Warren relied on his cell phone and pen and paper to communicate with the hearing people he was stranded with to learn what was going on and the updates on when

⁷ Ba p.11- [link](#)

⁸ Public Safety Canada - National Public Alerting System (NPAS) - [link](#)

⁹ John Warren - Facebook Post - [November 16, 2021](#)

¹⁰ John Warren - Facebook Post - [November 18, 2021](#)

¹¹ No Hope in Hope, BC - youtube video: [YouTube](#) No Hope in Hope, BC : DAY ONE: Arrival in Hope - just missed the massive mudslides on highway one; DAY TWO: No power and food; DAY THREE: Classes at Starbucks; DAY FOUR: Erosion at Othello Tunnels; DAY FIVE: Finally Got Out of Hope, BC

the roads would open up again.

24. For those geographical barriers, those that live on Islands have challenges when they are transporting across bodies of water between cities, for example, Victoria to Vancouver, which often experiences strong windstorms that are so strong that ferries are cancelled. Deaf people are usually sitting in the car in the car line up queues wondering why there's a delay. Often there is no communication to inform Deaf passengers what is going on, even with the delays with no ferries being cancelled and not available for 2 sailings due to winds. This is akin to sitting and waiting in the lineup for four hours but in the beginning sitting with the confusion of not knowing what is going on, and why no cars are moving forward when it is time to board a ferry. Deaf passengers have to get out of the car to go inside the terminal to find out. There is no real-time information displayed in the ferry lineup lot.

25. In September 2018, in Ottawa, there was a tornado and there were about 2,000 Deaf people in the town for a rally to support sign language recognition at the federal government, to be put in the Accessible Canada Act (ACA) and in the Indigenous Language Act (ILA). This caused a lot of chaos and confusion for all of these Deaf people, which was a tough and frustrating experience, we could not communicate until we all arrived at the Parliament Buildings on the day of the event. The tornado impacted the northwest of Ottawa, and everything was shut down, and there was a literal blackout with mobile tower communication. Towers usually can hold up to 6 hours of battery power. None of these towers had enough electric generators to ensure that they were kept running even after the power ran out. There was a lack of access to keeping everyone aware of what was happening, there were no sign language interpreters with the news or major events addressing the crisis.

26. In Canada, we are fortunate to have access to 9-1-1 through different accessible telecommunications platforms for relay services such as video relay services, IP Relay Services VRS, IP Relay, on the internet and on mobile apps. A brief description of each of these relay services are necessary for those who may be unfamiliar.

27. Video Relay Services, or VRS, is a service that enables people to have video conversations over the Internet. SRV Canada VRS is offered in Canada and is available in four languages, ASL/English and LSQ/French. It brings Deaf or Hard of Hearing people connected to the world around them, including service providers.

28. With SRV Canada VRS, everyone can communicate simply and effectively. Whether it's a grandmother connecting with her grandchild, a friend calling to catch up, or someone placing a call to learn about a new government service, SRV Canada VRS empowers all Canadians to connect and share in powerful ways.

29. [Canadian Administrator of VRS \(CAV\)](#) is a not-for-profit corporation that has been mandated by the Canadian Radio-television and Telecommunications

Commission (CRTC) to design, implement and oversee the delivery of video relay service (VRS) in Canada. The CAV's website describes using video relay services during an emergency as: *“Customers can use sign language using the Canada VRS app and ASL/English or LSQ/French Video Interpreters during the 9-1-1 calls. Emergencies are an important reason why Canada VRS customers must keep their home address details up to date in their VRS Account profiles.*

All 9-1-1 calls are treated as urgent. They go directly to first place in the Canada VRS call centre's queue. The supervisor in charge, or if a supervisor is not available, another VI is alerted to the 9-1-1 call, and assists as needed.

The VI and emergency answering personnel will attempt to confirm that the customer is at their registered address, or if not there, where they are. Note that the call is connected to the Public Service Answering Point (PSAP) based on the customer's location. Once the location and nature of the emergency is determined, the PSAP dispatches the appropriate responder; fire, police or medical.

The VI stays with the caller and assists the emergency services personnel as long as they are needed.”¹² In sum, Video Relay Services does have a system in place for access in emergencies.

IP Relay Services

30. IP Relay Service is a text-based service. In an IP Relay call, the relay operator communicates with the person with a hearing or speech disability via text and the person without a hearing or speech disability via voice. Access to the Internet and a device capable of Internet access are necessary for the person with a disability to communicate with the IP Relay operator at a toll-free number. The person without a disability dials a toll-free number to reach the Deaf person through a relay operator using any telephone service. ([CRTC Policy 2009-430](#))

31. Support for many technologies has made it possible to use almost any generic connected device to use a relay service, such as a personal computer, laptop, mobile phone, tablet, or other device capable of utilising the connection methods provided by an IP relay provider. IP Relay Services is now available in an application (“app”) format, while not fully accessible for those with visual disabilities, it exists.¹³

32. When using an IP relay service for an emergency call like 911, the relay operator will ask for the street address, city, and province from which the call is originating. If this information is not provided then the relay operator will be unable to complete the emergency call due to the lack of location information.

¹² Canada VRS - <https://srvcanadavrs.ca/en/>

¹³ IP Relay App - <https://apps.apple.com/ca/app/ip-relay-canada/id1489766469>

33. However there is one other method that is specific to 9-1-1: TEXT with 9-1-1 or T9-1-1. Let's describe it in full below.

Text with 9-1-1

34. Text with 9-1-1 is a system established by the CRTC, which was decided as a result of a trial with 27 people¹⁴. It works by Deaf, Deaf-Blind or hard of hearing and even those who are speech impaired who dial 9-1-1 and then are reached through text messaging from a local 9-1-1 dispatcher. How does the dispatcher know the caller's number? It is a requirement for those who wish to participate in the text with 9-1-1 communication system to register through their wireless service provider, and those with their phone numbers registered in these providers' database systems then are available to the dispatchers.

35. Consumers have a three-step process for registration, completion of name, phone number, agreement to activate registration and the terms and conditions of such registration. Simple questions are asked such as what the text number is, which language is preferred with the 9-1-1 operator and it usually takes 48 hours to process the registration.

36. The CWTA manages the website¹⁵ with the information on this emergency texting service. This website provides ASL and LSQ videos¹⁶ as well as step-by-step instructions and links to the registration webpages¹⁷ of each of the wireless service providers.

37. The only requirement is that the user must have a wireless device able to accept voice and text simultaneously, and all phones are included with voice due to the requirement to have 9-1-1 access. Consumers have a three-step process for registration.

38. In 2017, DWCC, CAD-ASC and CNSDB participated in a CRTC public proceeding where the collaborative group did research and produced a survey analysis report¹⁸ 601 respondents showed that 30% of the respondents did not know they were required to register to gain access to 911 via text messaging. Twenty-seven percent of the respondents found the registration process confusing. Over half of the respondents (57%) stated that there were issues with text with 911, resulting in that DWCC recommended that Text with 9-1-1 be improved and changed to a direct text 9-1-1 system which was implemented and is in use even today, in the United States.

¹⁴ CRTC CISC T 9-1-1 Trial Results - <https://crtc.gc.ca/public/cisc/es/ESRE0061.pdf>

¹⁵ CWTA Text with 9-1-1 website - <https://www.textwith911.ca/>

¹⁶ How to make a T9-1-1 call videos - <https://www.textwith911.ca/en/how-to-make-a-t9-1-1-call/>

¹⁷ Wireless companies - <https://www.textwith911.ca/en/wireless-service-providers/>

¹⁸ DWCC et al : [Rede\(a\)fining Accessible 9-1-1: Saving Lives A Survey Analysis Report Examining Deaf Hard of Hearing and DeafBlind Issues](#)

39. As a result of the work of the participating partnered group in the proceeding, CRTC agreed in its resulting policy, TNC 2018-182 that a better and more accessible alternative be made possible, and looked to what was happening in the States, with decision made by the Federal Communications Commission (FCC) that Real-time Text was the best possible alternative for accessible 9-1-1 services that include Deaf, Deaf-Blind and hard of hearing on equal footing with their hearing counterparts in Canada. We review what Real-time text is as follows.

Real-time Text 9-1-1

40. What is Real-time Text (RTT)? RTT¹⁹ is a text-based mode of communication where each text character appears on the receiving device at roughly the same time it is typed on the sending device.

41. RTT is a text-based mode of communication where each text character appears on the receiving device at roughly the same time it is typed on the sending device. This technology also allows text and voice at the same time.

42. Interesting to note, Real-time Text is the brainchild and patented²⁰ by a Deaf man, Norman Williams. A brief video²¹ is available that provides the history and background of the implementation of Real-time texting.

The advantages of RTT 9-1-1

43. *Real-time text allows characters to be sent as they are created without hitting “send.” This allows text to be sent at the same time as voice communications, permitting a more conversation-friendly service. In addition, by not requiring users to hit “send,” 911 call centre personnel, for example, will be able to receive even incomplete messages from people in need.* (Source: [FCC](#))

44. RTT is a benefit for both hearing and Deaf people, especially in emergencies, where seconds or minutes will make a big difference in peoples’ lives. RTT technology²² is intended for use by anyone who prefers to use text-based communications. Not just hard of hearing people, and Deaf-Blind, but also hearing people.

45. The advantages that RTT has for 9-1-1 include that no registration is required, it is faster as it is real-time, does not require clicking “send,” and it is a benefit for all DDBHH and hearing people in Canada.

¹⁹ Real-time text in Instant Messaging - <https://tap.gallaudet.edu/rtt/>

²⁰ Source: ABC7 - <https://wjla.com/news/local/gallaudet-helps-develop-real-time-text-technology>

²¹ Introducing Real-timeText - youtube:

 Introducing Real-time Text (with voice-over audio descriptions)

²² Standardization of real-time text in instant messaging (Researchgate) paper on RTT - [link](#)

The TTY and Real-Time Texting (RTT)

46. Eventually, by way of CRTC policies, it is the intention to have RTT replace text telephone (TTY) technology because TTY has more limited capabilities with today's more advanced telecommunications and internet technology.

47. Therefore, with all the benefits that the RTT brings it was designated as the best tool to use with 9-1-1. In the United States as well as in Canada, it will be used widely as RTT 9-1-1.

All options available for emergency communications

48. As a result of Telecom Regulatory Policy CRTC 2017-182²³, CAD-ASC and DWCC members have been involved with CRTC Emergency Services Working Groups (ESWG) and their respective committees CRTC Interconnection Steering Committee (CISC)²⁴ primarily to advocate and to ensure that the new technology is still compatible with TTY for the Seniors and Deaf-Blind who still use the older technology.

49. Based on a survey DWCC and CAD-ASC conducted back in 2017, and through conversations with those in the United States, our Committee believes that ALL options need to remain available for emergencies - TTY, IP Relay, VRS, Text with 9-1-1 and RTT NG911. It is the same in the USA, all of the different phone communication options are kept available, including even TTY.

Next-generation 9-1-1

50. Next-generation 9-1-1 (NG 9-1-1) is where the dispatchers can communicate with people in society in emergency situations with the use of photos, videos, video and audio as well as the Global Positioning System (GPS). With Real-time text (RTT) combined with Next-generation 9-1-1 (NG 9-1-1), there is an incredible chance to save more lives without waiting in such dire and critical situations.

Timelines

51. CRTC did undertake a review of Next-generation 9-1-1 with Telecom proceeding TNC 2016-116²⁵, and the resulting policy TNC 2017-182²⁶ was established, however, due to COVID-19 the timelines have been delayed and extended. Thus, according to the new proceeding where the public participated in discussions about the adjustment of timelines for Next Generation 9-1-1 going into effect, the new timelines were determined with Telecom Regulatory Decision

²³ CRTC TRP 2017-182 - <https://crtc.gc.ca/eng/archive/2017/2017-182.htm>

²⁴ CRTC CISC - <https://crtc.gc.ca/eng/cisc-cdci.htm>

²⁵ CRTC TNC 2016-116 - <https://crtc.gc.ca/eng/archive/2016/2016-116.htm>

²⁶ CRTC TRP 2017-182 - <https://crtc.gc.ca/eng/archive/2017/2017-182.htm>

2021-199.²⁷

52. To summarise the new timelines: Text with 9-1-1 will start to phase out in 2024; and in the same year RTT NG911 begins, and will be fully deployed in 2025.

53. Interesting to note, the next review for text based relay services according to Telecom Regulatory Policy 2018-466, will take place in 2023, but with the pandemic, it is hard to predict if it will remain on this schedule or be a little delayed.

54. While the CRTC has just wrapped up a proceeding investigating wireless accessibility, and of which DWCC and CAD-ASC as a collaborative group invested wholeheartedly its energy into the public consultative process, with the scope of the proceeding resting entirely on DWCC's organisation's *raison d'être* of its existence and work. Survey reports were published, with statistics that should be mentioned here.

Wireless accessibility

55. Deaf community members have continued to be concerned about their data on the wireless network due to videos, for example they watch videos with news and captions while on the wireless connections, and these videos use up extensive buckets of data.

56. DWCC has done quantitative and qualitative research²⁸ to show the CRTC that there needs to be better data package offerings than what is currently being provided. To note, in reference to the recent report²⁹ 62% of respondents go over the limit of their data plans due to watching ASL and LSQ video news. Further examples include: 61% of respondents frequently end up paying more for extra data usage, and 71% use 2-14GB more data while using the *SRVCanadaVRS* app. An infographic that summarises the results of the research study is available [here](#).

57. The Emergency Standards Committee and the DWCC are waiting for the policy outcomes of this CRTC [proceeding](#) where we hope the outcome is favourable when it comes to data plans for sign language users in Canada.

58. The usage of telecommunications accessibility applications and relay services while on data should not be impacted during emergencies. Pre-paid cards create disadvantaged accessibility during emergencies.

59. Back in 2018, Canadian Hearing Society (Currently known as Canadian Hearing Services) did a research project entitled "Barrier Free Emergency

²⁷ CRTC TD 2021-199 - <https://crtc.gc.ca/eng/archive/2021/2021-199.htm>

²⁸ [A Stark Reality Survey Report](#) (August 27, 2021)

²⁹ [A Stark Reality Survey Report](#) (August 27, 2021)

Communication Access and Alerting System Research Report”³⁰, 2018, which examined and recommended that sign language interpreters be provided when there are news broadcasts in the event of emergencies so Deaf viewers can get accessible information. As interpreters are rarely included in internet based broadcasting, it would be accessible to include the option to have interpreters in the online broadcasting especially when reaching out to communities without power.

2. Real life examples from the Committee

60. Since Canada and the rest of the world entered a pandemic it has become standard to have ASL/LSQ updates nearly daily, or now weekly from public health authority officials on both the provincial and federal government levels. Political leaders have given guidance and instructions to the Canadian public and been inclusive of Deaf, Deaf-Blind and hard of hearing. This is a good example of accessibility for all, yet, consistent national standards need to be established.

61. Committee members observe that there is an existing inconsistency in alerts distributed in Canada, Ontario gets frequent alerts for Amber alerts, tornados, police actions, extreme weather incidents, while in British Columbia, they got none for the June heat dome, the wildfires from July 21 to September 14, 2021, and in the month of November they experienced torrential rains and floods breaking up roads and blocking highways, severely impacting the supply chains such as food and gas.

62. Specific examples of alerts that were received in Ontario were the government alerting locals to extreme weather events such as tornadoes or violent thunderstorms. They even received police incident alerts, ie. shootings, while we in BC find out through Twitter and other means. There needs to be consistency with these alerts.

63. Standards Committee members shared concerns with regards to lack of adequate involvement of Deaf, Deaf-Blind and hard of hearing in trial periods of accessibility technology, with historically handpicked only 27 people in the Text with 9-1-1 trial, and in reference to the CAD-ASC’s Report³¹ *Technology Accessibility for Canadians with Disabilities Report* would like to ensure that there is mandated effort for participation in these trials with new and upcoming technologies for emergencies, including WPA.

3. Townhall input

64. The Deaf Community has some awareness of the CHS Report on a *Barrier Free Communication*³² during emergencies. However the community feels awareness should be promoted not only among the Deaf community for better advocacy but among government officials when designing structures, safety features

³⁰ Barrier-Free Emergency Communication Access and Alerting System Research Report - [link](#)

³¹ Technology Accessibility for Canadians with Communication Disabilities - [link](#)

³² Barrier-Free Emergency Communication Access and Alerting System Research Report - [link](#)

and emergency communications plans. People wondered if the CRTC was even aware of the report and its critical importance. People don't understand why this hasn't already been done so that there could be broadcasting proceedings reviewing these accessibility standards for emergencies.

65. Nova Scotia (NS) had a shooting situation shortly after the pandemic began, and Deaf members of the community there shared that there was no alert at the beginning for the NS shooting, until much later, this needs to be improved for the Province of NS.

66. Most common comments relating to communication and information was that airports and airline safety, and even ferry information were not sufficient and fully accessible for Deaf, Deaf-Blind or hard of hearing Canadians. Concern was about active shooting situations within the airports, how to make it safe, with private alerts sent to all within the airport, and signage such as large TV screens with pre-recorded ASL and LSQ translations (pre-recorded predictive scenario translations of common emergency situations)

67. One thing that struck the Standards Committee is the comment that Deaf-Blind said yes, while Deaf feel they are the last people to know, Deaf-Blind are the very very last people to know and often left in confusion, or even rather abandoned, as Deaf able-bodied people can at least notice there's a crisis, visually.

68. The government needs to make sure that WPA alerts are available on a wider scale, including available in any format without requiring mobile plans. The emergency alert texts or broadcasts should not only go to mobile users but those with iPad or tablets, most often used by Deaf-Blind and those who are physically disabled. Low income persons with disabilities cannot afford wireless plans, and emergency alerts should also reach them somehow.

4. Recommendations

69. The Wireless Public Alerts include ASL and LSQ video links of pre-recorded information with predictive generic emergency scenarios and standard instructions to manage disasters and emergencies.

70. That the Accessible Standards Canada ensures that any type of alerts, such as amber alerts or weather warning alerts to be broadcast to every phone, regardless if they have prepaid or on non-wireless ie. internet-only iPads, etc. for those who cannot afford wireless services and those who are on pre-paid plans.

71. That the Federal and Provincial patchwork coverage issues need to be addressed for Text with 9-1-1 and Wireless Public Alerts. Federal should change and make sure provincial ones follow up on it as a mandate especially with the incoming new technology of Real-time Text 9-1-1.
72. That the CAD-ASC requests the federal government to do an inquiry and to provide a report to the Deaf community why British Columbia does not issue and deploy wireless public alerts with a reliance on radios and other audio based communication. Relying on audio making emergency information inaccessible to DDBHH. The goal would be to provide access to Wireless Public Alerts in all provinces and territories and evening the playing field for Deaf people to receive information in real-time to be accessible in compliance with the *Charter of Rights and Freedoms*.
73. That the Federal Government should mandate that all Provinces make accessible use of the Wireless Public Alert system with no exceptions for all emergency broadcasts to ensure equal access for the Deaf community across the country where possible.
74. That the Federal Government shall establish a minimum standard that fully complies with the Charter of Rights and Freedoms and ensures equal access where possible for all Provinces to meet when employing the WPA system.
75. That the Federal Government defines limitations on accessibility only through available infrastructure and develops a plan to ensure older infrastructures are updated to carry the required technology to ensure that the accessibility standards can be met.
76. The Federal government needs to mandate that a large pool reflective of the diversity of the population of Deaf, Deaf-Blind and Hard of Hearing Canadians be invited into trial periods to give feedback and input for the accessibility of the new incoming Real-time text for NG9-1-1.
77. That the Canadian government incorporates technologies used in other countries such as the United States to improve emergency communications.
78. That the CRTC mandated emergency internet plans with cellular companies to allow for unlimited data and texting for Deaf customers in times of emergency.
79. That the CRTC needs to be mandated to provide sign language interpreters at all CRTC Emergency Standards Working Group meetings, as currently Deaf participants have to use VRS to participate in these meetings with over 100 emergency and telecommunication industry personnel.

- a. That the interpreters employed meet acceptable standards of interpreting as defined by the CASLI having passed accreditation screening by the Translation Bureau³³.
80. Airports and transportation terminals employ private alerts sent to all within the airport terminal, and signage such as large TV screens with pre-recorded videos of expected or predicted drills and emergency scenarios.
 81. That Signage at ferry terminals with LED displays with real-time text announcements for information about delays for ferries with short explanation of the reason for the delay. If possible have ASL and LSQ predictive pre recorded videos displayed on the electronic bulletin boards.
 82. That all those involved in telecommunication and accessibility of said subject increase education and awareness in regard to all of emergency telecommunications applications, such as Text with 9-1-1, RTT 9-1-1, and Wireless Public Alerts (WPA). There needs to be repeated and more frequent sharing of CWTA's ASL and LSQ videos on these topics by the CAD-ASC, DWCC, CDGM and all those with an interest in telecommunications accessibility.
 83. That CAD-ASC use the Accessible Canada Act as a means to request a telecommunications and broadcasting proceeding on wireless public alerts to review requirements to be inclusive of Canadians whose primary languages are sign languages as per 5.1.c³⁴.
 84. That CAD-ASC submit the CHS report "*Barrier Free Emergency Communication Access and Alerting System Research Report*"³⁵ and reference it to CRTC while requesting a broadcasting proceeding to be opened to establish Canadian broadcasting standards, expectations and policies for accessible emergency broadcasting that includes the primary languages of Deaf people, as recognized in the Accessible Canada Act.
 85. That CAD-ASC ensures the federal government and Accessible Standards Canada ensure that the World Federation of the Deaf (WFD) COVID-19 Toolkit³⁶ is applied when identifying and addressing any shortcoming as a result of the ongoing COVID-19 pandemic.

B. Disaster and Emergency Preparedness

Presented by Kimberly Wood

³³ Translation Bureau Accreditation process - [Link](#)

³⁴ Accessible Canada Act - [link](#)

³⁵ Barrier-Free Emergency Communication Access and Alerting System Research Report - [link](#)

³⁶ WFD COVID-19 Toolkit - <https://wfdeaf.org/covid19-toolkit/#x-section-05>

1. Background Information

86. This chapter refers to the planning and protocols the government has in place to prepare a response for a crisis event. In this section we will review disaster preparedness education information packages, public information methods and how inclusive the government agencies respond to emergencies. Deaf, Deaf Blind, and Hard of Hearing people need to be aware and be prepared for any emergencies or disasters. Any information that is covered in other sections will not be included in this section. Examples highlighted in the following section include both current and historical information of events that occurred following the ratification of the *Charter of Rights and Freedoms*³⁷.

87. The Standards Committee debated how to be inclusive but struggled as the needs of those with a mild hearing loss differed from those with profound hearing loss and those with vision loss compounding their hearing loss. Then to add to the challenge was the issue of language deprivation. Developing a one-size-fits-all approach was deemed not possible and we decided to explore the concept of an inclusive plan later on in Procurement.

88. During the course of the information gathering process, a province wide disaster struck the Province of British Columbia, providing the Standards Committee with real time data as the crisis unfolded. As a result, the flooding and mudslides of summer 2021 will be prominent in the report.

2. Real Life Examples

89. In British Columbia, a video released implied that many Deaf individuals were cut off from access to information for three days, while able-bodied individuals had access to radios, or were more likely to afford data plans, finding out what was happening in their preferred language. This was a barrier for the Deaf community who were faced with the challenge of finding out why they were cut off from the rest of Canada.

90. Anger arose from citizens of British Columbia when it was revealed that Ontario citizens get announcements that can be specific to their area such as tornadoes, bad weather, shooters, or other emergency situations, highlighting British Columbia's failure to take advantage of technology to be inclusive.

91. In Nova Scotia, They had late alerts going around regarding the RCMP shooting of April 2020, and preliminary reports from the current inquiry revealed that this information campaign was key to saving lives.

92. In 1987, Edmonton was hit with a tornado resulting in 24 deaths, and during this natural disaster, the situation was that the Deaf community had no information or communication about the tornado and it wasn't until not a few hours later or even

³⁷ Charter of Rights and Freedoms - [Link](#)

the next day that they found out by reading the newspaper. This led Debra Russell, and Joe McLaughlin to write recommendations that this safety issue be addressed.

3. Townhall Input

93. Those that attended the town hall, members of DDBHH communities across Canada, were greatly appreciative to have and see ASL and LSQ interpreters on screen with the public health officials during COVID-19. They wished to see more of this during times of disasters. Interpreters and Deaf Interpreters were appearing in Picture-in-Picture format on the broadcasts regarding Covid-19.

94. Unfortunately online media sources fell short of accessibility. It was disappointing as the same information was not consistently accessible. While it was accessible on the TV screens, it was lacking on the internet sources. Television media sources included interpreters, but their online counterparts were often lacking. It was inconsistent across multiple viewing platforms.

95. Subtitles weren't always accurate, especially if set to be auto-generated. There was too much of a reliance on auto-generated subtitles leading to greater confusion and it made it difficult to understand when discussing complicated emergency, health or disaster issues, especially if the subtitles didn't keep up. Captions were often too small or the wrong colours and not accessible to read, especially if they were white text on white backgrounds.

96. Suggestion for preparedness for emergencies is to have ASL/LSQ videos which includes promotion, awareness, and emergency kits, and this information should be shared with Deaf organisations.

4. Recommendations

97. That the Federal government incorporates a method that allows ASL/LSQ users to access the emergency announcements in signed language free of charge.

98. That the Federal government includes appropriately financially compensated representatives from Deaf organisations grounded in the cultural background of ASL/LSQ when planning crisis responses for the department that is handling the preparation for disasters and emergencies.

99. That the Federal Government works in partnership with local, or appropriate level Deaf organisations grounded in Deaf culture, ASL/LSQ where Deaf people can provide front-line advice and constructive feedback to improve strategic planning for emergencies ranging from local response to disasters requiring coordination and communications.

100. That the Federal Government should recognize that there are a significant number of citizens with hearing challenges, and efforts to communicate should be a

priority. Developing these plans with a Deaf advocacy or cultural organisation should be a priority.

101. That the Federal government under the Charter of Rights and Freedoms, works with the provincial and municipal level to provide funds and resources to ensure services are inclusive and accessible for those with disabilities.

102. That the Federal government ensures that there are, at the municipal level, contingency plans for locations for Deaf people to meet up and receive information and instructions that complies with the Charter of Rights and Freedoms³⁸.

³⁸ Charter of Rights and Freedoms - [Link](#)

C. Transportation

Presented by Darryl Hackett

1. Background Information

103. This section will focus on Transportation in which the Deaf, Hard of Hearing and DeafBlind travellers have experienced numerous difficulties and challenges on all modes of transportation and the hubs and these difficulties and challenges have created a lot of unnecessary and unavoidable barriers and negative psychological impacts if applicable on the travellers.

Interprovincial and National Transportation

104. On the transportation topic, there needs to be a description of the different levels of travel in Canada, to clarify things. When a Canadian travels between two provinces, it is considered interprovincial or national transportation. International travel means travel between Canada and a different country. To understand these concepts, it is needed to examine specific examples; interprovincial travel could be trains that travel from Calgary to Vancouver (Alberta to BC), or trains from Ottawa to Montreal (Ontario to Quebec). When travel is considered domestic, it means within the province, and is not covered by the federal government but the province, such as trains from Toronto to Ottawa. It's the same concept when you are at the airport, you see the separation of Domestic and International for flights. Domestic flights are the flights that fly within the province, or within the country.

Air Transportation

105. For the Federal Government it can be a bit challenging to understand the complexities of the governance and oversight of bodies within the federal government for air travel. Airports are governed by the Canada Transportation Agency. Airlines, for aircraft and air safety, are overseen by the Transport Canada Civil Aviation (TCCA)³⁹.

106. There is also the new Air Passenger Protection Act⁴⁰, Canada Transportation Act (Law passed in 2019-150).

107. For the airlines, there are three types of rules that they must follow:

A. The rules set by the CTA in the *Air Passenger Protection Regulations* that cover flights to, from and within Canada, including connecting flights.

³⁹ Transport Canada Civil Aviation (TCCA) - <https://tc.canada.ca/en/aviation/civil-aviation>

⁴⁰ Air Passenger Protection Act - link - <https://rppa-appr.ca/>

B. The rules set by the International Civil Aviation Organisation's Montreal Convention.

C, The rules set out by the airlines in their terms and conditions listed in their Tariff, which is the contract between you and the airline when you buy a ticket.

108. Air passengers should know their rights, and that the Canadian Transportation Agency advises that you should contact your airline first to attempt to resolve it. If that does not work, you can file a complaint with the CTA. The CTA processes complaints and settles disputes between travellers and airlines. The CTA will try to resolve the matter quickly and informally through [facilitation](#) or [mediation](#).

Airports

109. However in serious cases, the RCMP can get involved, by going to airport terminals in response to potential criminal incidents. The Deaf community's worst fear is a similar situation to that happened at Vancouver airport, YVR where Polish visitor Robert Dzienkanski, who did not speak English, who needed translators was unnecessarily tasered because he was simply frustrated⁴¹. Deaf people have that fear of that situation happening to us because of communication barriers. The Federal Government must ensure this never happens for Deaf people whose primary communication is sign language.

Marine transportation

110. In Canada there are three types of ferry systems; Provincial, Trans-Provincial and International. Transport Canada however still governs the ferry systems for Canada, regardless of which level of government the ferry company falls under.

- a. BC Ferries and Owen Sound Transportation Company: Routes travels inside the province which is not under federal oversight but the ferries must follow the rules of Transport Canada, for example, people on lowest deck of the ferry cannot stay in the car while the ferry is in transport, if you want to stay in your car, must reserve and can stay in the car on the upper deck.
- b. Marine Atlantic: St. John's, NL to Sydney, NS - (Interprovincial, this means from one province to another province) so fully under federal oversight.
- c. Bay Ferries Ltd: Yarmouth NS, to Bar Harbour, Maine.

⁴¹ CTV News article - [Audio released from night of BC Taser death | CTV News](#)

Land transportation with Highways for Transport

Trucks & the Supply Chain

111. The Federal government is responsible for regulating trades and thus the Transportation industry, however Provinces are responsible for enforcing the regulations as set by the Federal government as well as their own.

112. A supply chain is when we have raw materials to bring to the customers. Natural disasters such as flooding or earthquakes damaging highways and freeways, causes disruptions and barriers in the flow of goods. It is critical to inform drivers of these barriers in a timely manner to allow for rerouting to reduce disruptions.

113. The following three paragraphs focus on the important subjects: real time stories, townhall inputs from the Deaf, Hard of hearing and DeafBlind travellers and recommendations and they will be detailed in order below.

2. Real life stories

114. The lack of ASL and LSQ video on pre-takeoff flight safety manuals have been noticeable among the Deaf, Hard of hearing and DeafBlind air travellers. Although a few major airlines have provided open captions or subtitles in their manuals in video, they are not sufficient and not satisfactory to the travellers whose primary languages are ASL and LSQ not English and French. In addition, the white font in the captions against the white background in the videos are problematic and unhelpful to us because they are barely readable.

115. In the major transportation hubs such as airports, train stations, bus terminals et al they have lacked the accessible internal local Wifi Public Announcement (WPA) for the Deaf, Hard of hearing and DeafBlind travellers. It is imperative for us to have an accessible communication into the reliable and robust WPA where the announcements in LSQ and ASL about the delays, incidents, changes et al are widely available to passengers whose primary languages are sign languages.

116. We have often complained or expressed our frustration that many transportation hubs and the trains, ferries et al often have provided weak and poor WIFI internet connections which leads to poor quality of video messages and chat for us to use. The lack of best quality on the connections is a major barrier to us because it avoids us from using video relay services and video messages and chats.

117. At all the transportation hubs, there should be mandatory strobe light alert systems & light colour system strobes.

118. We have seen that the trains, cruise ships and ferries do not have ASL, LSQ and open captions in videos about their emergency procedures such as emergency doors available. It is important for them to devise a plan to have the videos accessible with the Deaf, Hard of hearing and DeafBlind travellers through the consular processes with the national DHHDB organisations.

3. Townhall input

119. During our virtual town hall meetings with Deaf people across Canada, we gathered a lot of invaluable testimonials from the people who had gone through various different negative experiences with the transportation companies. We are here to share some of their testimonies with you below:

Air travel

120. Participants shared stories where they were sometimes offered to read a copy of the braille flight manual only if there were no flight safety video available aboard. They want to see the ASL/LSQ videos aboard all flights no matter how small or big the commercial airplanes are.

121. Sometimes the airlines embarrassingly offer us their wheelchairs although we are physically able to walk.

122. The Deaf air travel passengers are not allowed to sit next to the emergency door aboard the airplanes although there are clear and simple instructions on how to use it posted on the doors.

123. While boarded on the plane, in case of emergencies, inside the planes available to be promptly displayed on the television screens, there should be available ASL & LSQ pre-recorded videos for announcements for delays or emergencies safety briefs.

124. Participants wished to see ASL / LSQ videos for emergency exit plans on flights, trains and ferries, including those on the planes that actually describe, in ASL or LSQ, how to put the oxygen masks on and safety during emergency landing information on the little seat television screens.

125. There should be ASL/LSQ videos on the airline protection act and the complaint process.

Marine transportation

126. Aboard the B.C. Ferries and the Marine Atlantic Ferries we noticed three utmost things they lacked below:

- No fire alarms with flashing strobe lights below the decks where the motor vehicles are parked aboard the ferries.
- No electronic or LED display bulletin boards below the decks. They should be installed for our safety directions and announcements.
- The TV screens where the subtitled or open captioned announcements and information tidbits should be added In the lounges, cabins and washrooms.

Land transportation

127. The DHH long haul truckers have faced some difficulties with the port authorities. The emergency situation or disaster is brought up without their knowledge when they park their transport truck at the locations while loading or picking up cargoes at the location. Presently they have had to communicate directly with their dispatchers for the emergency alerts, and they are not independent. They are depending on others for emergency information.

4. Recommendations

128. That Transport Canada create a permanent consultative or advisory board with the DDBHH representatives from the national organisations, representatives from all national transportation industries and federal representatives. Their mandate shall be to break down all the barriers and make all the transportation and hubs fully and completely accessible for the DDBHH passengers. Moreover they shall use tools, resources and education to help the transportation industries make their transport services accessible.

129. That Parliament updates Transport Canada's Accessible Transportation for Persons with Disabilities Regulations (ATPDR) in order to accommodate the Accessible Canada Act.

130. That Parliament undertakes a review and updates all federal transportation regulations to make all the services and vehicles accessible according to the Accessible Canada Act.

131. That whenever those regulations are updated, the federal agencies and departments must inform the DDBHH people by posting ASL/LSQ videos with Deaf Interpreters on their social media.

132. That the Federal government develop regulations to improve services for Deaf people travelling to Canada to access interpreting services in compliance with the United Nations Convention on the Rights of Persons with Disabilities

133. That Parliament create international and interprovincial air/rail/marine travel standards and guidelines to ensure that transportation is fully accessible for the

DDBHH Canadian passengers.

134. That Parliament, as part of the review, must mandate all the air/rail/marine industries to have ASL/LSQ videos about the safety and the emergencies available for the DDBHH passengers aboard airplanes, ferries and trains.

135. That Crown agencies involved in transportation under the Federal Government purview mandate equal access for Deaf riders to information through improved internet access where possible and pre-recorded messages on transportation vehicles be inclusive of ASL/LSQ

136. That Transport Canada update and implement accessibility sensitivity training including but not limited to the following;

- a. Flight manuals for those with hearing loss to be in the written language of choice, and not in braille unless requested.
- b. That Deaf people are not automatically greeted with wheelchairs unless requested upon arrival at a terminal.
- c. That airliners review their policies of refusing to seat Deaf people by exits.

137. That Transport Canada reviews all evacuation sites to ensure their accessibility is updated and in compliance with disabilities' requirements.

138. That Transport Canada enact the following recommendations for long-haul truckers with hearing loss;

- a. That the alerts flashing on their dispatch screen notifying the driver of incidents ahead.
- b. That the emergency evacuation sites be more accessible with a strobe light colour identification system (red, yellow, green).

D. Procurement Goods & Services Employment

Presented by Travis Morgan

1. Background Information

139. Procurement Goods and Services Employment (PGSE) is the logistic backbone of the government. While a subject that is difficult to gather information on, it is still critical to the success of any overall recommendation CAD-ASC can make. During the course of discussions both among the Standards Committee and in town halls, it was expressed that there was a concern that the Government of Canada does not have the appreciation of the necessity for contracts that involve the Deaf. As a result, there is a strong feeling that the Deaf community is left out of planning as demonstrated by the failure of the British Columbian Government to consider the needs of the Deaf during the floods.

2. Examples

140. Revenue Canada still makes use of TTY numbers, but concerns have been expressed if Revenue Canada and other Government agencies actually check the TTYs for incoming calls. The Deaf population have begun to widely use Video Relay Services as TTYs are not considered accurate or accessible for ASL users. As a result, TTYs are being considered an obsolete technology.

141. It should be noted that Deaf people have expressed frustration with Revenue Canada not using the TTY or disconnecting the call when using a relay service through the TTY. As a result, this has left a feeling that any service in case of an emergency, would not be Deaf friendly when seeking information.

142. Poor training of Call Centres when making relay calls. Customers often complain that they ignore TTY calls, or say they do not have permission to speak to the Relay Services. There have been examples where it's been requested that the Deaf customers verbally call the centre to confirm that it is them speaking. Video Relay has the same code of ethics as phone relay services.

3. Townhall input

143. Concerns about qualifications of people providing feedback on accessibility for government building design and emergency design

144. Concerns about perception of the Government not using Deaf-owned but other services that profess to cover hearing loss rather than Deafness.

145. Concerns about lack of accessibility at the border, no Deaf Border Guards. Source of stress

4. Recommendations

146. That the Government of Canada employ where possible, Deaf people grounded in the needs of the profoundly Deaf, including but not limited to visual cues and the languages of the Deaf for planning of building design on accessibility concerning emergency situations. That those languages include at least but not limited to American Sign Language and/or Quebec Sign Language.

147. That those languages include at least but not limited to American Sign Language and/or Quebec Sign Language.

148. That when consulting with Emergency Response planning and service providers, the Canadian Government includes local consultants and relevant Deaf Organisations with appropriate financial compensation for services.

149. That CAD-ASC compiles a list of organisations and individuals for the Government of Canada to consider when developing Emergency planning.

E. Built Environment

Presented by Travis Morgan

1. Background Information

150. This section will examine the design of government structures to see how accessible they are to including disabilities. The study focused on Deaf individuals as well as Deaf people with additional challenges such as vision impairment.

2. Examples

151. Airports and other transit hubs employ announcements but few visual cues for Deaf people to be able to glean information at a glance.

152. Government buildings evacuation designs

153 Local crisis code communications via light signals.

154. Design of evacuation, refugee camps established by the Federal Government

3. Townhall input from people

155. Concerns regarding a structure's ability to actually let Deaf people know of a crisis, especially in washrooms or locations out of the general light of sight of the public.

156. Concerns from colour contrast of walls, making it difficult to see during evacuations

157. Concerns with access to cellular data, wifi data for Deaf people during emergencies and if the government buildings could provide free wifi during emergencies.

158. Concerns that wifi at airports and other government regulated structures would be too weak to allow for video interpreting of crisis information

159. Concern that the visual and sound based alert systems would not reach Deaf-Blind or those with their phones on silent.

4. Recommendations

160. That multi-colouring strobe lights to be installed coded for specific emergencies.⁴²
161. That structure design to take into consideration vision issues for Deaf-Blind in case of evacuation
162. That Structural design to incorporate visual aid devices to inform occupants of emergencies such as TV screens at key locations with standardised ASL/LSQ recordings.
163. That Government structures to provide free wi-fi during emergencies to allow Deaf people access to data to get information
164. That Government to incorporate a SMS or WAP alert system to phones in the building zone to alert those on site of building-specific crises
165. That Government launches an awareness campaign of services provided on sites.
166. That fire alarms frequencies should alternate between high and low frequencies to ensure hearing aid and cochlear implant users have a greater chance of hearing the alarm.

Overall Recommendations

167. The Standards Committee spent several months of review and comparison, along with other data from international events to further efforts in ensuring the recommendations were as thorough and in depth as possible. The following recommendations can also be found in their relevant section of the above report.

Communication & Information

1. That the Wireless Public Alerts include ASL and LSQ video links of pre-recorded information with predictive generic emergency scenarios and standard instructions to manage disasters and emergencies.
2. That the Accessible Standards Canada ensures that any type of alerts, such as amber alerts or weather warning alerts to be broadcast to every phone, regardless if they have pre-paid or on non-wireless ie. internet-only iPads, etc. for those who cannot afford wireless services and those who are on pre-paid plans.

⁴² The strobe light colour code is described here - <https://asd.epsb.ca/>

3. That the Federal and Provincial patchwork coverage issues need to be addressed for Text with 9-1-1 and Wireless Public Alerts. Federal should change and make sure provincial ones follow up on it as a mandate especially with the incoming new technology of Real-time Text 9-1-1.
4. That the CAD-ASC requests the federal government to do an inquiry and to provide a report to the Deaf community why British Columbia does not issue and deploy wireless public alerts with a reliance on radios and other audio based communication. Relying on audio making emergency information inaccessible to DDBHH. The goal would be to provide access to Wireless Public Alerts in all provinces and territories and evening the playing field for Deaf people to receive information in real-time to be accessible in compliance with the Charter of Rights and Freedoms.
5. That the Federal Government should mandate that all Provinces make accessible use of the Wireless Public Alert system with no exceptions for all emergency broadcasts to ensure equal access for the Deaf community across the country where possible.
6. That the Federal Government shall establish a minimum standard that fully complies with the Charter of Rights and Freedoms and ensures equal access where possible for all Provinces to meet when employing the WPA system.
7. That the Federal Government defines limitations on accessibility only through available infrastructure and develops a plan to ensure older infrastructures are updated to carry the required technology to ensure that the accessibility standards can be met.
8. That the Federal government needs to mandate that a large pool reflective of the diversity of the population of Deaf, Deaf-Blind and Hard of Hearing Canadians be invited into trial periods to give feedback and input for the accessibility of the new incoming Real-time text for NG9-1-1.
9. That the Canadian government incorporates technologies used in other countries such as the United States to improve emergency communications.
10. That the CRTC mandates emergency internet plans with cellular companies to allow for unlimited data and texting for Deaf customers in times of emergency.
11. That the CRTC needs to be mandated to provide sign language interpreters at all CRTC Emergency Standards Working Group meetings, as currently Deaf

participants have to use VRS to participate in these meetings with over 100 emergency and telecommunication industry personnel.

- a. That the interpreters employed meet acceptable standards of interpreting as defined by the CASLI having passed accreditation screening by the Translation Bureau⁴³.

12. That Airports and transportation terminals employ private alerts sent to all within the airport terminal, and signage such as large TV screens with pre-recorded videos of expected or predicted drills and emergency scenarios.
13. That Signage at ferry terminals with LED displays with real-time text announcements for information about delays for ferries with short explanation of the reason for the delay. If possible have ASL and LSQ predictive pre recorded videos displayed on the electronic bulletin boards.
14. That all those involved in telecommunication and accessibility of said subject increase education and awareness in regard to all of emergency telecommunications applications, such as Text with 9-1-1, RTT 9-1-1, and Wireless Public Alerts (WPA). There needs to be repeated and more frequent sharing of CWTA's ASL and LSQ videos on these topics by the CAD-ASC, DWCC, CDGM and all those with an interest in telecommunications accessibility.
15. That CAD-ASC submit the ⁴⁴CHS report "*Barrier Free Emergency Communication Access and Alerting System Research Report*" and reference it to CRTC while requesting a broadcasting proceeding to be opened to establish Canadian broadcasting standards, expectations and policies for accessible emergency broadcasting that includes the primary languages of Deaf people, as recognized in the Accessible Canada Act.
16. That CAD-ASC use the Accessible Canada Act as a means to request a telecommunications and broadcasting proceeding on wireless public alerts to review requirements to be inclusive of Canadians whose primary languages are sign languages as per 5.1.c⁴⁵.
17. That CAD-ASC ensures the federal government and Accessible Standards Canada ensure that the World Federation of the Deaf COVID-19 Toolkit⁴⁶ is applied when identifying and addressing any shortcoming as a result of the ongoing COVID-19 pandemic.

⁴³ Translation Bureau -

<https://www.tpsgc-pwgsc.gc.ca/bt-tb/services/interpretation/visuelle-visual-eng.html>

⁴⁴

⁴⁵ Accessible Canada Act - [link](#)

⁴⁶ WFD COVID-19 Toolkit - <https://wfdeaf.org/covid19-toolkit/#x-section-05>

Disaster and Emergency Preparedness

18. That the Federal government incorporates a method that allows ASL/LSQ users to access the emergency announcements in signed language free of charge.
19. That the Federal government includes appropriately financially compensated representatives from Deaf organisations grounded in the cultural background of ASL/LSQ when planning crisis responses for the department that is handling the preparation for disasters and emergencies.
20. That the Federal Government works in partnership with local, or appropriate level Deaf organisations grounded in Deaf culture, ASL/LSQ where Deaf people can provide front-line advice and constructive feedback to improve strategic planning for emergencies ranging from local response to disasters requiring coordination and communications.
21. That the Federal Government should recognize that there are a significant number of citizens with hearing challenges, and efforts to communicate should be a priority. Developing these plans with a Deaf advocacy or cultural organisation should be a priority.
22. That the Federal government under the Charter of Rights and Freedoms, works with the provincial and municipal level to provide funds and resources to ensure services are inclusive and accessible for those with disabilities.
23. That the Federal government ensures that there are, at the municipal level, contingency plans for locations for Deaf people to meet up and receive information and instructions that complies with the Charter of Rights and Freedoms.

Transportation

24. That Transport Canada create a permanent consultatory or advisory board with the DDBHH representatives from the national organisations, representatives from all national transportation industries and federal representatives. Their mandate shall be to break down all the barriers and make all the transportation and hubs fully and completely accessible for the DDBHH passengers. Moreover they shall use tools, resources and education to help the transportation industries make their transport services accessible.
25. That Parliament updates Transport Canada's Accessible Transportation for Persons with Disabilities Regulations (ATPDR) in order to accommodate the Accessible Canada Act.
26. That Parliament undertakes a review and update all federal transportation regulations to make all the services and vehicles accessible according to the

Accessible Canada Act.

27. That whenever those regulations are updated, the federal agencies and departments must inform the DDBHH people by posting ASL/LSQ videos with Deaf Interpreters on their social media.
28. That the Federal government develop regulations to improve services for Deaf people travelling to Canada to access interpreting services in compliance with the United Nations Convention on the Rights of Persons with Disabilities
29. That Parliament create international and interprovincial air/rail/marine travel standards and guidelines to ensure that transportation is fully accessible for the DDBHH Canadian passengers.
30. That Parliament, as part of the review, must mandate all the air/rail/marine industries to have ASL/LSQ videos about the safety and the emergencies available for the DDBHH passengers aboard airplanes, ferries and trains.
31. That Crown agencies involved in transportation under the Federal Government purview mandate equal access for Deaf riders to information through improved internet access where possible and pre-recorded messages on transportation vehicles be inclusive of ASL/LSQ
32. That Transport Canada update and implement accessibility sensitivity training including but not limited to the following;
 - a. Flight manuals for those with hearing loss to be in the written language of choice, and not in braille unless requested.
 - b. That Deaf people are not automatically greeted with wheelchairs unless requested upon arrival at a terminal.
 - c. That airlines review their policies of refusing to seat Deaf people by exits.
33. That Transport Canada reviews all evacuation sites to ensure their accessibility is updated and in compliance with disabilities' requirements.
34. That Transport Canada enact the following recommendations for long-haul truckers with hearing loss;
 - c. That the alerts flashing on their dispatch screen notifying the driver of incidents ahead.
 - d. That the emergency evacuation sites be more accessible with a strobe light colour identification system (red, yellow, green).

Procurement Goods and Service Delivery

35. That the Government of Canada employ where possible, Deaf people grounded in the needs of the profoundly Deaf, including but not limited to visual cues and the languages of the Deaf for planning of building design on accessibility concerning emergency situations. That those languages include at least but not limited to American Sign Language and/or Quebec Sign Language.
36. That those languages include at least but not limited to American Sign Language and/or Quebec Sign Language.
37. That when consulting with Emergency Response planning and service providers, the Canadian Government includes local consultants and relevant Deaf Organisations with appropriate financial compensation for services.
38. That CAD-ASC compiles a list of organisations and individuals for the Government of Canada to consider when developing Emergency planning.

Built Environment

39. That multi-colouring strobe lights to be installed coded for specific emergencies.⁴⁷
40. That structure design to take into consideration vision issues for Deaf-Blind in case of evacuation
41. That Structural design to incorporate visual aid devices to inform occupants of emergencies such as TV screens at key locations with standardised ASL/LSQ recordings.
42. That Government structures to provide free wi-fi during emergencies to allow Deaf people access to data to get information
43. That Government to incorporate a SMS or WAP alert system to phones in the building zone to alert those on site of building-specific crises
44. That Government launches an awareness campaign of services provided on sites.
45. That fire alarm frequencies should alternate between high and low frequencies to ensure hearing aid and cochlear implant users have a greater chance of hearing the alarm.

⁴⁷ The strobe light colour code is described here - <https://asd.epsb.ca/>

Conclusions

In closing, the Standards Committee has noticed that the work done in researching the concepts of a standardised emergency planning system has been developed, researched and proposed several times on a regional and provincial level in the past. Frustration has been expressed by Deaf individuals who recalled past inquiries after major natural disasters with the failure of the Federal Government to implement standard emergency procedures that are inclusive.

The Committee recognises that the Federal Government has limited jurisdiction over structure designs, but can still play a role in encouraging provincial governments to adopt a standardised plan that is consistent coast to coast to coast for the sake of accessibility for all Deaf, Deaf-Blind and Hard of Hearing Canadians.

After reviewing the feedback at the town hall sessions, the Standards Committee agreed that the Federal Government is lacking in developing policies that are inclusive of the Deaf Community at every stage necessary, including but not limited to public relations on the national, provincial and local level. This is critical to maintaining clear transparency and clarity every step of the way and thus ensuring accessibility has been met.

As a result, the Standards Committee feels that the Accessibility Standards Canada should take more inclusive steps to involve the Deaf community in ensuring accessibility has been met at all three levels and involving as many relevant Deaf organisations as possible. Therefore it is our highest hope that there are mandates that arise from this report and a committee to carry it out and that committee considers the diversity and inclusion of Deaf, Deaf-Blind and the Hard of Hearing communities.

The current cost of developing a plan that is inclusive has gone down drastically with the advent of COVID, wireless technology and the support structures required. As a result, it is the opinion of the Standards Committee that now is the ideal time to push the Federal Government to adopt an inclusive emergency preparedness plan.

The Committee encourages, in light of the decline of the taboos around mental health, that the Federal Government seriously consider the 45 recommendations and associated sub-recommendations. To meet these recommendations would be considered a positive impact on the mental well being of the Deaf community and a major improvement to the physical health and well being of Canadians. It would reduce the strain on Emergency resources and reduce the risk of loss of life during a disaster.

Note: all the resources referenced throughout the paper are in the footnotes.

******* End of Document *******