

# FOCUS ON TOMORROW

RESEARCH FUNDED BY WORKSAFEBC

## Workplace Emergency Planning Inclusive of People with Disabilities

June 2008

Principal Investigator/Applicant  
Margaret Birrell

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Additional copies of this publication may be obtained by contacting:

Research Secretariat  
6951 Westminster Highway  
Richmond, B.C. V7C 1C6  
Phone (604) 244-6300 / Fax (604) 244-6299  
Email: [resquery@worksafebc.com](mailto:resquery@worksafebc.com)



Research Report:  
Workplace Emergency Planning  
Inclusive of People with Disabilities

Prepared by  
the BC Coalition of People with Disabilities  
July 2008

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## TABLE OF CONTENTS

Executive Summary	3
Research Problem/Context	6
Methodology	8
Literature Review Findings:	9
1. Guides, Templates and Kits	10
2. Courses	17
3. Plans, Procedures and Accommodations	18
4. Reports and Conference Proceedings	21
Key Informant Interview Findings:	23
1. Community-based Organizations	24
2. Community Services Societies	25
3. Non-governmental Organizations	26
4. Institutions of Learning	26
5. Business	27
6. Local Government Authorities	28
7. Provincial Government Ministries	29
8. Federal Government Ministries	30
9. Unions	31
Implications for Future Research	32
Policy and Prevention	33
Dissemination/Knowledge Transfer	33
Recommendations	34
Appendix	35
Bibliography	36

## EXECUTIVE SUMMARY

In 2001, there were 128,070 people with disabilities employed in British Columbia in a variety of occupations. This is approximately 44% of employable people with disabilities in our province<sup>1</sup>. The BC government has a goal to increase the number of people with disabilities who are employed to 56% by 2015<sup>2</sup>. In addition, employers in Canada are faced with an aging workforce that is developing age-related disabilities<sup>3</sup>. These factors will increase the need for employers to be inclusive of people with disabilities in their policies and procedures in the workplace.

The workplace presents many potential hazards for workers with disabilities during an emergency or disaster. It is important that all workers and employers are aware of these hazards and what to do in order to prevent injury or death. General workplace emergency plans do not address the needs of people with disabilities and put workers at risk. Different disabilities require different approaches and solutions to emergency planning in the workplace. Planning for alternative communications, inclusive evacuation and recovery procedures becomes of key importance to employee safety in disaster situations from fires, floods, hazard materials incidents, and earthquakes. Knowledge, planning, and practice will protect workers with disabilities and save lives. It is the responsibility of the employer and the workers to plan together to know who will need assistance, what kind of assistance they will need, and ensure that planning occurs to protect the lives of all workers.

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<sup>1</sup> Statistics Canada, Participation and Activity Limitations Survey, 2001, “Education, Employment and Income of Adults with and without Disabilities.”

<sup>2</sup> Province of British Columbia Strategic Plan 2006/07 – 2008/09

<sup>3</sup> Sleeth, Jane E., Optimal Performance Consultants, “Successful Return to Work Programs – A Hybrid Model.”

This research project examined current workplace emergency planning practice in British Columbia in relation to inclusivity of the needs of people with disabilities through the review of emergency procedures and key informant interviews. The research included a literature review and analysis of emergency planning practices in other provinces in Canada and in the United States that can be applied to the BC workplace context. From the research we have developed a practical handbook for employers on how to create and implement emergency plans that are inclusive of workers with disabilities.

### **Literature Review**

The literature review on emergency planning and workers with disabilities was conducted mid-July to mid-September 2007. The review included guides, templates, kits, training courses, and specific emergency procedures. We reviewed documents from the United States, England, Canada, and British Columbia from a range of sources: government, non-profit organizations, colleges and universities.

Overall the guides and templates from the United States are comprehensive in the accommodation considerations for people with disabilities in the workplace, while the Canadian documents either provide minimal planning/procedure information in this regard or none at all. When planning for workers with disabilities has been included in Canadian guides and plans, the primary focus is on workers with mobility disabilities, for example people in wheelchairs. The comprehensiveness of the American guides and plans is due to the requirements under the Americans with Disabilities Act (ADA) to accommodate people with disabilities in the workplace; Canada does not have an equivalent to the ADA.

## **Key Informant Interviews**

We approached 116 potential participants for key informant interviews from a range of non-profit organizations, all levels of government, businesses, unions, and colleges/universities in British Columbia and other provinces. This was done through an introduction letter outlining the project and the purpose of the interviews. This was followed up by phone calls and emails. We had 29 responses, which is a 25% response rate. The key informant interviews were conducted from mid-September 2007 to January 2008.

While we did gain access to further emergency plans/procedures through the key informant interviews with employers in British Columbia and other provinces, we were met again with accommodations for people with disabilities in the workplace being minimal to non-existent, with one exception. It was discovered that, due to small staff sizes, the majority of non-profit work sites contacted had no emergency plans whatsoever.

## **Recommendations**

The literature review and key informant interviews highlight the need for more comprehensive workplace emergency planning that is inclusive of workers with disabilities in British Columbia. The BC Coalition of People with Disabilities recommends the following based on our research findings:

1. Incorporate planning for a broad range of workers with disabilities into all phases and components of the workplace emergency plan, not just evacuations.
2. Use multiple methods of emergency notification to workers depending on the specific needs of the workforce.

3. Evacuation planning needs to go beyond leaving people with mobility disabilities in fire refuge areas – there must be plans to fully evacuate them from the building when there is imminent danger to their lives.
4. Workplaces in British Columbia should utilize the employer's handbook, "Workplace Emergency Planning for Workers with Disabilities," developed from this research, to assist them in their emergency planning.

## **RESEARCH PROBLEM/CONTEXT**

In 2001, there were 128,070 people with disabilities employed in British Columbia in a variety of occupations. This is approximately 44% of employable people with disabilities in our province<sup>4</sup>. The BC government has a goal to increase the number of people with disabilities who are employed to 56% by 2015<sup>5</sup>. In addition, employers in Canada are faced with an aging workforce that is developing age-related disabilities<sup>6</sup>. These factors will increase the need for employers to be inclusive of people with disabilities in their policies and procedures in the workplace.

The workplace presents many potential hazards for workers with disabilities during an emergency or disaster. It is important that all workers and employers are aware of these hazards and what to do in order to prevent injury or death. Planning for alternative communications and inclusive evacuation and recovery procedures becomes of key importance to employee safety in disaster

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<sup>4</sup> Statistics Canada, Participation and Activity Limitations Survey, 2001, "Education, Employment and Income of Adults with and without Disabilities."

<sup>5</sup> Province of British Columbia Strategic Plan 2006/07 – 2008/09

<sup>6</sup> Sleeth, Jane E., Optimal Performance Consultants, "Successful Return to Work Programs – A Hybrid Model."

situations from fires, floods, hazard materials incidents, and earthquakes. Knowledge, planning, and practice will protect workers with disabilities and save lives.

This research project examined current workplace emergency planning practice in British Columbia in relation to inclusivity of the needs of people with disabilities through the review of emergency procedures and key informant interviews. The research included a literature review and analysis of emergency planning practices in other provinces in Canada and in the United States that can be applied to the BC workplace context. From the research we have developed a practical handbook for employers on how to create and implement emergency plans that are inclusive of workers with disabilities.

General workplace emergency plans do not address the needs of people with disabilities and put workers at risk. Different disabilities require different approaches and solutions to emergency planning in the workplace. For example, communicating emergency information to the deaf and hard of hearing, and the blind and visually-impaired require strategies particular to these groups of people. Employers need to have a plan for what to do with workers with mobility aids that can not go down stairwells when the elevators can not be used during an emergency. These are only a few examples of how planning for workers with disabilities requires more than a general emergency plan. There are many more considerations and new technology solutions for the workplace. It is the responsibility of the employer and the workers to plan together to know who will need assistance, what kind of assistance they will need, and ensure that planning occurs to protect the lives of all workers.

## **Objectives of the research**

1. To examine current workplace emergency planning practice in British Columbia in relation to inclusivity of the needs of workers with disabilities
2. To increase the knowledge base of emergency planning in the workplace in British Columbia and Canada
3. To apply the research findings to the development of a workplace emergency planning handbook to provide employers and workers with a practical solution to this issue

## **METHODOLOGY**

### **Literature Review:**

The literature review on emergency planning and workers with disabilities was conducted mid-July to mid-September 2007. The review included guides, templates, kits, training courses, and specific emergency procedures. We reviewed documents from the United States, England, Canada, and British Columbia from a range of sources: government, non-profit organizations, colleges and universities.

### **Key Informant Interviews:**

We approached 116 potential participants for key informant interviews from a range of non-profit organizations, all levels of government, businesses, unions, and colleges/universities in British Columbia and other provinces. This was done through an introduction letter outlining the project and the purpose of the interviews. This was followed up by phone calls and emails. We had 29 responses, which is a 25% response rate. The key informant interviews were conducted from mid-September 2007 to January 2008.

## RESEARCH FINDINGS

### Literature Review Findings

Firstly, it must be stated that many of the Canadian and American documents do not use current accepted language when referring to disabilities; many of the documents used special needs, the disabled, and the word impaired rather than using people or persons with disabilities or visual or mobility disabilities. The agencies responsible for producing these documents should update their materials to reflect current language usage. When these words are used in this report it is only when referring to the actual titles or specific references in the documents themselves.

In the majority of Canadian workplace emergency plans that we reviewed, the needs of people with disabilities are taken into consideration only in the evacuation section of the plan, if at all. The majority of the plans, if they do refer to people with disabilities, only focus on people with mobility disabilities – wheelchair users and non-ambulatory people. Some Canadian guides and plans refer to visual and hearing disabilities.

Furthermore, many plans and procedures only focus on evacuation during a fire and taking people who are non-ambulatory to fire refuge areas for first responders to rescue. There is, overall, a lack of continuity of planning for workers with disabilities throughout every stage of the emergency plan. For example, some places had extensive plans that include procedures for earthquakes, bomb threats, hazard materials spills etc., but do not consider how workers with disabilities would be evacuated in each of these circumstances. However, if the procedures state that all employees and visitors must exist the building during a bomb threat and the only evacuation planning in place for

the evacuation of people with disabilities is to be taken to fire refuge areas to wait for first responders, this clearly shows unequal planning for the safety of all employees.

The United States documents cover more categories of disability in their guides, anywhere from five to seven, compared to one to three areas of disability in the Canadian documents. However, the majority of the information in all of the guides, templates, and plans are generally similar. The United States documents tend to be more comprehensive.

## **1. GUIDES, TEMPLATES, AND KITS**

### **Canada**

#### **1.a. Human Resources and Social Development Canada**

HRSD Canada has produced the Model Fire Safety Plan. Within this document is “A Guide for the Evacuation of Mobility-Impaired Persons,” and, “A Guide for the Evacuation of Mobility-Impaired – Two Stage Evacuation”. The Model Fire Safety Plan does not address any other disability. Both guides cover evacuation procedures, monitors’ roles and responsibilities, a building registry, fire drills, reporting of disabilities by employees, temporary disability, visitors, residential and assembly occupancies, rescue teams, and including planning for people with mobility disabilities within a Fire Safety Plan. The difference is that the “Two Stage Evacuation” guide provides evacuation procedures for three scenarios: fire on the floor that the person with the disability is on; no fire on the floor; and evacuation by the fire department. This is the only document that indicates that if there is a fire on the floor that the monitors assigned to the person with the mobility disability should proceed to evacuate the person down the stairwell – after the floor is cleared – to the closest safe floor. This guide also provides important information about evacuation by first responders. Most people probably assume that the fire department will help with all evacuations

when they arrive at the building, however, the Model Fire Safety Plan states that “most Fire Departments will undertake evacuation of mobility-impaired persons by means of the Fire Fighter service elevator if manpower commitments permit.”<sup>7</sup> The guide further states that the fire department should be consulted when developing the workplace plan as to their ability to provide elevator evacuation for people with mobility disabilities; if they indicate that, because of limited personnel needed for fire fighting operations, they can not provide this, an alternate plan for the evacuation of people with mobility disabilities is needed.

### **1.b. The Canadian Paraplegic Association**

The Canadian Paraplegic Association has produced the “Fire Safety for People with Disabilities,” kit. The kit consists of seven sections: Case Studies of People with Activity Limitations; Background Information about Fire Safety for People with Disabilities; Technical and Mobility Aids and Devices; Fire Safety Strategies; Sign Language for Emergencies; Statistics on Disabilities and Fire; and Organizing an Accessible Public Education Session. The Case Studies provide examples of real life emergency situations, disability-specific problems to each case study and strategies to try. Section two provides information on the elderly, as well as people with the following disabilities: mobility, deaf and hard of hearing, blind or visually impaired, learning disabilities, and multiple or hidden disabilities. This section looks at the general concerns of each of these disability groups in an emergency and ways for others to communicate with them. The most valuable information in section four is the evacuation methods and includes: guiding a person who is blind or visually impaired, evacuating a person in a wheelchair, evacuation devices, and transferring techniques. The Sign Language section is unique to this document; we have not found reference to this in any

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<sup>7</sup> Page 4, Human Resources and Social Development Canada, Model Fire Safety Plan, Guide for the Evacuation of Mobility-impaired – Two Stage Evacuation

other document. This section is primarily for first responders and presents diagrams of some key Sign Language words that would be helpful for communicating with deaf people during emergencies. This section concludes with communication pointers. The statistics section is valuable because it provides Canadian statistics on disabilities by province in general and specific statistics regarding people with disabilities and fires. The information in this kit can be easily transferable to other emergency situations. Unfortunately, the kit is not easily accessible as there is a cost to purchase it, while other guides we researched were accessible on the internet.

## **International**

### **1.c. University College of London (UCL), England**

UCL has a Fire Safety Technical Guide, which includes Disability Emergency Egress and Evacuation Issues/Policy. In the UK, as in the United States, there are legal regulations requiring employers to provide suitable emergency evacuation procedures for people with disabilities. This includes the provision of Safe Fire Havens, Fire Refuges, Communications, fire warning systems and training for staff. UCL has developed a guide and assessment tool to be used by Head of Departments and their staff to create individual strategies for emergency egress, the Personal Emergency Egress Plan. This guide refers to three areas of disability: hearing, visual, physical or mobility. This is the only document that states that fire refuges should be used only as a last resort and that all other options should be considered first. An important aspect of this document is the definitions of a fire refuge and a fire safe haven; we did not find these definitions in any other documents that referred to safe havens or fire refuges. This guide also discusses the problems and benefits of evacuation chairs. It is the only document researched that states that a suitable form of communication should be available at each safe haven/refuge area, for example big button

telephones with hearing loop technology and emergency communication call systems specifically designed for emergency use by people with disabilities.

#### **1.d. United States Department of Transportation (DOT)**

The DOT has Emergency Preparedness Guidelines for People with Disabilities. This guideline covers the roles and responsibilities of supervisors, managers, employees, and Emergency Wardens. It addresses planning for visitors and contractors; management of employee emergency information; emergency communications; strategies for conducting drills; and emergencies after core business hours. The guide looks at facility modifications, such as pathway marking systems. It provides information on buddy systems for employees with disabilities and tips on interacting with people with disabilities. This was a valuable resource for developing the employer's handbook.

#### **1.e. The United States National Disability Authority**

The United States National Disability Authority produced the "Access Handbook Template – a Tool to Help Manage the Accessibility of the Built Environment." Chapter 8 focuses on Emergency Equipment and Evacuation. 8.3, Important Safety Issues, discusses the need to encourage people with disabilities that may need assistance during an emergency to make themselves known. It stresses the importance for those planning for public buildings to have emergency egress plans for all people with disabilities developed on the basis of the general need associated with a broad range of disabilities. This section covers personal emergency egress plans; fire drills; fire alarms; and staff training in the safe transportation of people in wheelchairs. 8.4, Steps to Produce Personal Emergency Egress Plans presents an excellent set of questions to consider and this is followed by the, Template: Personal Emergency Egress Plan.

### **1.f. Job Accommodation Network and the Office of Disability Employment Policy of the U.S. Department of Labor**

The Job Accommodation Network has produced the Employers' Guide to Including Employees with Disabilities in Emergency Evacuation Plans. While this guide explains the legal requirements that pertain to the Americans with Disabilities Act (ADA), which is not relevant to the Canadian context, it does provide information on accommodating employees with disabilities in the following areas: motor, sensory cognitive/psychiatric, and respiratory. This guide states that employees with disabilities should be included in all three stages of the workplace emergency evacuation plan: development, implementation, and maintenance. Essentially this means involving people with disabilities from the stage of identifying emergency accommodation needs, evacuation drills, to ensuring that accommodations continue to be effective and modified when necessary.

### **1.g. The United States National Fire Protection Association (NFPA)**

The NFPA has produced the "Emergency Evacuation Planning Guide for People with Disabilities". Like the Job Action Network guide, this document is within the context of the ADA. This document is very valuable as it focuses on building evacuation plans for five general categories of disabilities: mobility, visual, hearing, speech, and cognitive in relation to emergencies. Within the category of mobility, it looks at wheelchair users, the non-ambulatory, and those with respiratory disabilities. The guide briefly discusses temporary conditions such as injury, as well as multiple disabilities. The guide also has a section on service animals. As well, this guide presents four elements of evacuation information that people need: notification, way finding, use of the way, and assistance. It discusses each of these four elements in regards to building evacuation plans for each of the categories of disabilities. The guide also provides a Personal Emergency Evacuation Planning

Checklist. This document is easy to read, and is one of the most thorough guides found during our research.

#### **1.h. Project Safe EV-AC, funded by the National Institute on Disability and Rehabilitation Research (NIDRR)**

Project Safe EV-AC has produced a number of training materials on the evacuation and accommodation of people with disabilities: "Information for Individuals with Disabilities"; "In Advance"; "In a Pinch;" and "Train the Trainer". The Information for Individuals with Disabilities document focuses on the ADA and US legalities, however it does give helpful suggestions for employees on putting a request for accommodation in writing to an employer and provides a sample letter. The In Advance document is different than other guides on emergency planning for people with disabilities in that it looks at the history of evacuation of people with disabilities, addresses overcoming fear and anxiety, and establishing community links. It also provides a Situation and Solution section for each of the following disabilities: motor, respiratory, speech, cognitive, psychiatric, hearing, and vision. It provides resource information on websites. This document was an excellent resource for developing our employer's handbook. In a Pinch is an abbreviated version of In Advance, briefly covering the techniques for evacuating people with disabilities from different sites and situations; it is primarily a pictorial document. The Train the Trainer document includes understanding the importance of inclusive emergency planning and evacuation plans and disability awareness and etiquette. This document provides training on developing, implementing, and maintaining inclusive emergency evacuation plans covering the seven disability categories that are in the In Advance document. This document also addresses fear and inertia, provides a number of checklists, and information on how to train others. All four of

the Project Safe EV-AC documents compliment each other. These four documents provide a comprehensive approach to emergency planning for people with disabilities.

### **1.i. The US Interagency Coordinating Council on Emergency Preparedness and Individuals with Disabilities, Subcommittee on Emergency Preparedness in the Workplace**

They have produced a framework of emergency preparedness guidelines for federal agencies, "Preparing the Workplace for Everyone: Accounting for the Needs of People with Disabilities". This is a comprehensive guide put in the context of societal changes since September 11, 2001, and the need to include people with disabilities in emergency planning. The first section Necessity of Plans addresses legal considerations and the ADA, which is not pertinent to the Canadian context. The largest portion of the document focuses on development, implementation, and practice and maintenance. The final section of the document is In Focus Topics, which covers such topics as: engaging the disability community, assistance and equipment needs, service animals, first responder considerations, elevator safety, notification systems, and types of drills. One of the most valuable aspects of this document is that after each section there is a Critical Questions List, which is repeated in its entirety in Appendix A; these questions are very valuable for those who are responsible for their work site emergency planning. This is a comprehensive document that was a valuable resource in the development of our employer's handbook.

### **1.j. The National Institute for Chemical Studies (USA)**

The NICS has produced "Shelter in Place at Your Office: A general guide for preparing a shelter in place plan in the workplace". This document does not focus on people with disabilities, however, it does provide important information for workplace emergency planners. It provides a sample Shelter in Place plan covering the areas: communications, control of air movement, shelter room

procedures, all clear procedures. For each of these areas it looks at procedure, responsible party, and needed supplies/equipment/rules. It also provides valuable Checklists for each of the employees responsible for different aspects of the Shelter in Place plan: communication employees, maintenance employees, front door monitor, back door monitor, all employees, floor monitors, window sealing crew, and door sealing crew. This is an important and unique document that could be modified to include considerations for workers with disabilities.

#### **1.k. National Institute of Standards and Technology, United States Fire Administration**

The “Emergency Procedures for Employees with Disabilities in Office Occupancies”, is a comprehensive guide that covers a broad range of emergency planning issues with regards to people with disabilities. Its contents included: Identifying Special Needs, Discussion with the Individual, Put it in Writing, Periodic Review, Notification Appliances, Movement Aids/Equipment, Elevators, Miscellaneous Devices, Areas of Refuge/Rescue Assistance, Identifying Those with Special Needs, Buddy Systems and Fire Wardens, Spontaneous Assistance Techniques, Fire Department Coordination, After Working Hours, and Critical Language. This document was used as a resource for developing our employer's handbook.

## **2. COURSES**

**Canadian Centre for Occupational Health and Safety (CCOHS)** has two e-courses: Emergency Planning for Workers and Emergency Response Planning. While these are excellent e-courses for learning the fundamentals of emergency planning and response in the workplace, the information it provides on planning for workers with disabilities is minimal.

The Emergency Planning for Workers course has a separate section on Evacuating People with Special Needs stating only that special evacuation procedures must be established for four areas of disability. This e-course does not integrate planning for workers with disabilities into each of the areas the courses covers: establishing the team; assessment of risks and capabilities; development of the plan; implementation of the plan; testing the plan (exercises and drills); and improving the plan.

This is the same for the Emergency Response Planning e-course, which looks at four elements of emergency management – prevention, preparedness, response, and recovery. The section on Communication Systems does not even discuss the use of alternate communication systems for emergency notification for employees with disabilities. Under the section General Evacuation Procedures it states only that there should be a “clearly defined process to assist people with disabilities” with no indication as to what this might include. The other significant area where accommodation for workers with disabilities is missing is the section on Training of personnel.

### **3. PLANS, PROCEDURES, AND ACCOMMODATIONS**

#### **Canada**

##### **3.a. Boeing Winnipeg Plant**

The Boeing Plant in Winnipeg is an example of how technology is being used by employers to communicate with employees with disabilities during emergencies. Boeing Winnipeg has provided approximately two dozen deaf employees with Blackberries. Emergency evacuation notification is sent to these employees on their blackberries.

### **3.b. Department of Community Services, Nelson Place, Nova Scotia**

The Emergency Preparedness Manual, Nelson Place (2007), references people with disabilities in a number of areas throughout the document. Under the section Preventative Measures it mentions keeping aisles and hallways free of boxes and other items that may obstruct the passageway in an emergency. The section on the Floor Emergency Warden responsibilities during emergencies is very specific about procedures for assisting people with disabilities, including: assisting them to safe refuge areas and requesting monitors to stay with individuals with disabilities, assisting individuals with disabilities to exit the building, and to report to fire services where these individuals are located and the assistance they will need. The Floor Warden's Role in Pre-emergencies, is equally specific, stating that the Floor Warden needs to be familiar with all staff with disabilities that will require assistance evacuating. In the section on the Responsibilities of Monitors, it states that they should work with the Chief Emergency Warden and the person requiring assistance to develop a plan to address a person's emergency accommodation needs. Furthermore, the Nelson Place procedures address the issue of assistance during evacuation: potential endangerment to staff assisting; the duty to ensure other occupants are aware of an emergency; and using people with disabilities as a resource. The Nelson Place manual also addresses procedures for visitors with disabilities. Appendix A speaks to the responsibility of employees with disabilities to inform the Chief Emergency Warden of the assistance they will need during an emergency and discusses Responsibility for Arrangements.

## **British Columbia**

### **3.c. City of Vancouver**

The City of Vancouver "Employee Emergency Procedures Guide," does not incorporate the considerations of employees with disabilities into each section of the guide: how to prepare; 911

procedures; medical emergencies; power failure; bomb threats; earthquake; and fire safety, with the exception of the section on evacuation where it indicates to other employees to “assist people with disabilities” in three areas of disability: the Non-ambulatory, Visually Impaired, and the Hearing Impaired. The procedures suggest that the person assisting an individual with a disability inquire about any “special needs” the individual may have. During response and evacuation is not the time to inquire about a persons evacuation needs; this should be part of the planning and exercise drills done at the work site prior to any emergency. Attempts to interview City of Vancouver Health and Occupational Safety staff regarding emergency planning and employees with disabilities were unsuccessful due to the three month civic strike during the time we were conducting key informant interviews.

#### **3.d. Ministry of Employment and Income Assistance, and the Liquor Distribution Branch, British Columbia**

Both of the Emergency Procedures manuals for these two Ministries have a section on “Evacuation of Persons with Disabilities” and include three disabilities: non-ambulatory, Visually Impaired, and Hearing Impaired. The information is very basic and only focuses on evacuation of people with disabilities

#### **3.e. Simon Fraser University (SFU), British Columbia**

Simon Fraser University does have a section on Evacuation of Disabled Persons in their emergency plan, which addresses three areas: Visually Impaired Persons, Hearing Impaired Persons, and Wheelchair Users. The information is minimal and is directed toward those who would be assisting an individual with a disability to evacuate during an emergency. In the actual Simon Fraser University Emergency Plan there does not appear to be anything specific about staff

and students with disabilities. Attempts to interview the Occupational Health and Safety planner at SFU was unsuccessful.

### **3.f. Thompson River University, British Columbia**

The Thompson River University Emergency Response Plan covers a wide range of emergency scenarios: bomb treat; civil disturbance and demonstrations; earthquake; elevator failure; evacuation; fire emergency procedures; gas leak; hazardous material spill; hostage situations; power failure; rape/assault prevention; and suspicious or criminal behaviour. The only section that mentions people with disabilities is the Evacuation section. Under the Evacuation section they have a separate section, Evacuating Persons with Disabilities, which covers three areas of disability: persons with limited mobility; persons with visual disabilities, and persons with hearing disabilities. In their procedures, people with limited mobility are to be "escorted to the nearest fire safe stairwell" until the fire department arrives. There is no alternate means suggested for the evacuation of non-ambulatory people. We have to ask, what are non-ambulatory individuals supposed to do while everyone else is evacuating the building during a bomb threat or hazardous material spill? Attempts to interview the Occupational Health and Safety person at Thompson River University was unsuccessful.

## **4. REPORTS AND CONFERENCE PROCEEDINGS (UNITED STATES)**

### **4.a. The Unites States Department of Education**

The Unites States Department of Education held a conference in 2004 on Emergency Evacuation of People with Physical Disabilities from Buildings. The conference proceedings are comprehensive and address a number of emergency evacuation issues: the benefits and problems

of evacuation devices; the responsibility of plan development; evacuation strategies; computer notification systems (CENS); and the issue of universal design.

The conference highlighted the US Department of Agriculture (USDA) as an example of an employer using multiple and alternate ways of communication during emergencies; their program includes a public address (PA) system, CENS, voice and text messaging, an employee information line, a radio network, and an in-house television system with scrolling capabilities and voice translation. For employees who are deaf and hard of hearing, the USDA has strobe lights installed as needed in offices and provides paging system devices that automatically send out a signal. The USDA also has an online registration for people with disabilities to receive text-based paging systems. The Department of Defense also uses CENS, which has been uploaded to everyone's computer. When an emergency occurs a message is sent to the server, which flashes an alert on individual computer screens. A screen reader allows a blind person to "read" the actual message. This document states that after September 11, 2001 the strategy of waiting in an area of refuge became unacceptable to many people. The conference also looked at the lack of preparedness of work sites in the World Trade Centre towers before and during 9/11. The National Organization on Disability's Harris Survey of 2001 showed that the workplaces of over 50% of people with disabilities employed full- or part-time had no plan in place for their safe evacuation; a follow up survey in 2004 showed only a slight decrease in this number.

#### **4.b. The United States Department of Labor, Office of Disability Employment Policy**

The United States Department of Labor, Office of Disability Employment Policy, hosted the Emergency Preparedness for People with Disabilities Interagency Seminar of Exchange for Federal Managers in December 2003. The Summary report showcases the emergency planning of

three federal departments: the Department of Labor (DOL); the Department of Transportation (DOT); and the Department of Defense, Defense Intelligence Agency (DIA). Basically, all three departments highlighted the importance of integrating the considerations of people with disabilities into all areas of the emergency plan and procedures. This document was used as a resource for the employer's handbook.

## **KEY INFORMANT INTERVIEW FINDINGS**

It was our hope that the key informant interviews with employers in British Columbia and other provinces would provide us with some examples of Canadian best practices that we did not find in the literature review. While we did gain access to further emergency plans/procedures through the interview process, we were met again with accommodations for people with disabilities in the workplace being minimal to non-existent, with one exception.

While BC safety standards require emergency plans to include the safety of all employees, the standards do not specifically address accommodations for employees with disabilities. Therefore, work sites such as community centres, large businesses, and government work sites will have emergency plans. However, meeting the safety standards does not fully address the needs of emergency notification and evacuation for many workers with disabilities.

With all of the emergency plans and procedures that do include considerations for people with disabilities that we discussed with the interview respondents, the greatest flaw is relying on taking people with mobility disabilities to safe refuge areas to wait for first responders. None of the

organizations, businesses, or government authorities we interviewed have developed procedures for evacuating people with mobility disabilities from buildings, with one exception. During the September 11, 2001 attacks on the World Trade Towers, people waiting in safe refuge areas for first responders died. During a major earthquake in the Lower Mainland, first responders will not be rescuing people from safe refuge areas. If everyone else in the building is being evacuated because of a bomb threat or hazardous chemical spill, there has to be procedures for evacuating people with mobility disabilities as well.

### 1. Community-based Organizations

It was discovered that, due to small staff sizes, the majority of the 14 non-profit and community-based organizations we interviewed had no emergency plans. Whether they had employees and volunteers with disabilities or not, a number of the organizations contacted did have clients or members with disabilities that use the premises. The majority did not conduct drills.

Three of the interview respondents of disability organizations spoke about being in the process of developing emergency plans. One of these organizations, the Neil Squire Society, stated that they currently include personal emergency preparedness as part of their Employ-Ability Program; each person with a disability taking this program in British Columbia learns about personal preparedness for the workplace and taking responsibility for themselves. Nowhere else in the literature or in other interviews did we encounter an organization doing this.

Only three of the community-based organizations had emergency plans, one of which included no provisions for employees, volunteers, or visitors with disabilities. The second, the MS Society of

BC, includes considerations for people with disabilities in its emergency procedures in a number of ways: they have a buddy system for volunteers and staff with disabilities; staff and volunteers with disabilities are involved in drills; workers with disabilities are taken to the safe refuge area and the Emergency Response Team member notifies the building control base of the numbers and location of those waiting in the refuge areas. Workers and volunteers with disabilities were not involved in the development of the plan, however, the MS Society spokesperson said that their input is welcomed. The third is the BC Coalition of People with Disabilities (BCCPD), which has included people with disabilities in the development of the plan, has employees and volunteers conduct self-assessments on their needs during emergencies, conducts assessment of those that can be part of an individuals support team and provides training. The BCCPD also does regular drills with all staff and volunteers.

## **2. Community Services Societies**

The 411 Seniors Centre in Vancouver, has a plan that includes considerations for employees, volunteers and members/users of the site. Every floor has a refuge area and each floor has designated staff as emergency floor wardens. The floor wardens have two or three assistants on each floor. The procedures for the floor wardens is to take individuals with disabilities on their floor to the refuge areas and to make sure everyone is evacuated. The refuge areas are easily accessible by first responders. The 411 Seniors Centre has practice drills twice a year with staff and members. They have an Access-Ability Committee the does emergency planning and recently all of the committees of the centre did a risk assessment of the building. They also do workshops on emergency preparedness for members. However, the 411 Seniors Centre, like all plans we have encountered in our research, does not have a procedure for evacuating non-ambulatory

individuals down the stairs in emergency situations where first responders may not be attending; for example, in a major earthquake.

Large community services societies (community centres) would be required to have emergency plans due to their staff size. the Penticton and District Community Resource Centre, a research participant, is one community centre that has incorporated provisions for people with disabilities into its plan.

### **3. Non-governmental Organizations (NGOs)**

The Canadian Red Cross, BC Coastal Region, has an emergency plan that meets WorkSafe BC standards. However, their plan does not specifically address employees and volunteers with disabilities. We were told that they do not currently have employees or volunteers with disabilities, but that they do have the capacity to accommodate staff and volunteers with disabilities within their emergency plan. Each Red Cross office is responsible for developing its own emergency plan.

### **4. Institutions of Learning**

Out of the six institutions of learning that we contacted, only one responded. Those contacted were BCIT, the Justice Institute of BC, Simon Fraser University, Thompson River University, University of Northern BC, University of Victoria, and the University of Northern BC. The University of Northern BC spokesperson for Health and Safety, informed us that UNBC has a basic fire plan and the emergency planning and response component is very limited. Neither the fire plan or emergency plan include considerations for staff, students, and visitors with disabilities. The Simon Fraser University and Thompson River University emergency procedures are reviewed under the Literature Review section of this report.

## 5. Business

We contacted the Emergency Preparedness and Planning for Industry and Commerce (EPPIC), which has many business members throughout British Columbia. Information on our research project was sent out to EPPIC members through their contact person, but we received no responses. We also contacted Terasen Gas and BC Hydro. BC Hydro did not respond. Terasen Gas declined to take part in the research stating that they did not currently have any employees with visible disabilities, but in the future should they have, they would adjust their current plans to meet the needs of those employees.

The Vancouver Airport Authority has 26,700 employees. In 2007 YVR Emergency Response dealt with 1,490 medical calls, 37 aircraft emergency landings, nine aircraft ground incidents, five security incidents, three minor building fires, one power outage, and one bomb threat. At YVR strobe lights become activated during a fire alarm to alert people with hearing disabilities. The strobes are carefully timed to not induce seizures in people who have epilepsy. Areas of refuge are available for people with disabilities if timely and safe evacuation is a problem. There are Automated External Defibrillators in a number of locations at YVR, to be used by trained personnel. In the Terminal Evacuation Plan, they have a brief section on Assisting People with Disabilities. The Evacuation Plan states the daily responsibilities of YVR personnel when reporting to their work area; one of these responsibilities is to identify persons in their area who might require assistance during an evacuation. The plan suggests to YVR personnel that they should ask the person with the disability how to assist them and they should always communicate to the person how they plan to help them. YVR Emergency Planning consults with a disability consultant for its emergency planning. YVR staff are provided training in disability awareness. Their emergency plan is being

rewritten in 2008. They are currently researching multiple notification systems – public announcements (PA), pagers, and screens.

## **6. Local Government Authorities**

We contacted 18 municipalities and local districts in different regions of BC: Vancouver, Langley, Whistler, Sechelt, Victoria, Kelowna, Penticton, Kamloops, Cranbrook, Salmon Arm, Nelson, Armstrong, Quesnel, Grand Forks, Prince Rupert, Fort Nelson, Fort St. John, and Prince George. Four of the municipalities responded: Victoria, Fort St. John, Prince George, and Quesnel.

All of the four municipalities had workplace emergency plans. Prince George has emergency planning involving one staff who is a wheelchair user. The employee was not part of the plan development, but does take part in annual practice drills, and the person has been identified to the Floor Wardens who are designated to help evacuate the staff person. However, the Floor Wardens are not trained in disability specific evacuation methods, nor is the individual wheelchair user. The interview respondent stated that the City of Prince George probably has employees with hidden disabilities, but these individuals have not been identified and no accommodation has been made for them in emergency procedures.

The interview respondent for Fort St. John said that each department creates its own emergency plan, that there is no overall plan for all of the City's facilities. Fort St. John has the most basic evacuation provisions for employees with disabilities – their fire department has told them to take people with mobility disabilities to the nearest fire refuge.

In Victoria, Emergency Wardens are instructed to assist people with disabilities during an emergency, but as in Prince George, they are not specifically trained in how to evacuate people with disabilities. Workers with disabilities do take part in practice drills. However, Victoria's written policy does not specifically address considerations for people with disabilities in emergencies.

Unfortunately, we conducted the interviews during the three month long civic strike in the City of Vancouver, so no one from the City responded to our request for an interview. However, we have reviewed their emergency procedures in the Literature Review section of this report.

## **7. Provincial Government Ministries and Agencies**

### **British Columbia**

The BC Public Service Agency develops the safety policies that go to all of the Ministries of British Columbia. The interview respondent said that the BC Public Service Agency has policy that states that emergency planning needs to take everyone into account, but it is not specific to employees with disabilities. It is left up to each ministry to take these general safety policies and develop their own procedures and processes.

The interview respondent for the Provincial Emergency Program (Ministry of Public Safety) stated that their draft plan of October 2006 indicates that "all physically challenged people should be assisted by emergency wardens or staff." Other than that, the plan only refers to "all personnel", it does not specifically address the needs of workers with disabilities.

The Provincial Health Services Agency (PHSA) has 10,000 employees throughout British Columbia. Emergency plans are developed by each office at the site and unit level. PHSA has a generic plan for staff with no consideration for people with disabilities. The expectation is that managers will modify the plan to suite their staff and site needs.

### **Other Provinces**

The emergency plan of Alberta Premier's Council on the Status of Persons with Disabilities office does not address the needs of people with disabilities. The Disabilities Issues Office in Winnipeg, Manitoba does not address the needs of people with disabilities even though they employ staff with disabilities.

The Literature Review discusses the emergency plan for Nelson Place in Halifax, of the Nova Scotia Department of Community Services. The interview respondent stated that this plan was done in consultation with the Persons with Disabilities Commission that was a tenant in the building when the plan was developed.

## **8. Federal Government Ministries and Agencies**

The Federal Department of Fisheries and Oceans in Vancouver is an example of a best practice in Canada of how people with disabilities needs can be addressed in emergencies. The Department of Fisheries and Oceans refers to them as Persons Requiring Assistance (PRAs). They are in a newer building that is built to the latest codes and is almost completely accessible. They have audible and visual signals for alarm situations, Braille floor buttons in the elevator, fire phones on each floor, and automatic door openers in key locations.

They have met with a group of PRAs and their assistants, asked for their feedback, advised them in depth of planning around their evacuation in a variety of situations, and added to their emergency plans. They have purchased and deployed a stair evacuator system. The evacuation devices they have installed are high up in the 18 storey building so that they can be deployed anywhere in the building. They have asked persons facing a variety of disabilities about measures that could be taken to manually evacuate them specific to their particular challenges. The floor monitors are able to evacuate individuals manually at least two floors if it is a matter of life over limb. They have planned to manually evacuate individuals with mobility disabilities, if necessary, and have trained staff in how to make the individual comfortable and mobile again.

The Department of Fisheries and Oceans drill their teams regularly.

They follow the Incident Command System (ICS) which provides a common terminology. They have searchers, stairwell monitors, deputy warden, first aider, and wardens for each floor. Anyone left on a floor is left with sufficient assistants to manually evacuate them three floors if they were in danger. The floor warden personally advises security at the evacuation point of how many people are left and on which floor. Also, the group of people left on each floor call their Emergency Operations Center via the fire phone to advise them of their situation. This way they have redundant reporting of those left in the building.

## **9. Unions**

We contacted the BC Federation of Labour and the BC Government Employees Union (BCGEU). We thought they may be aware of work sites that have best practices when it comes to emergency planning. The BC Federation of Labour did not provide us with any information or contacts. Our

contact at the BCGEU stated that all government work sites would be in compliance with BC Occupational Health and Safety Standards. However, as mentioned previously at the beginning of the interview section, the standards do not specify emergency planning accommodations for people with disabilities, so work places just meeting the minimum standards are most likely not meeting the communication and evacuation needs of workers with disabilities.

## **IMPLICATIONS FOR FUTURE RESEARCH**

The 2004 conference on Emergency Evacuation of People with Physical Disabilities from Buildings, sponsored by the United States Department of Education, provided excellent examples of considerations that need to be studied further: universal design in relation to emergency planning, and the movement time required for people with mobility disabilities to evacuate from buildings.

In the area of universal design, there are such considerations as: wider staircases and larger landings, increased dimensions for clear floor space in places of refuge for wheelchairs, increased maneuvering clearance in means of egress, ramped entrances and exits of buildings, and the force needed for door openings and closures. With movement time required for non-ambulatory individuals there are such considerations as: descending and ascending stairs or ramps and the speed for individuals using manual and power wheelchairs and the maneuverability factor.

Since how quickly people can evacuate from a work site during an emergency can often mean life or death, universal design and time-movement considerations are critical safety factors.

## **POLICY AND PREVENTION**

The literature review and key informant interviews made apparent the need for work sites in British Columbia to be more comprehensive and inclusive in their approach to emergency planning. While BC safety standards require emergency plans to include the safety of all employees, the standards do not specifically address accommodations for employees with disabilities. Therefore, meeting the minimum standards will not address the needs of emergency notification and evacuation for many workers with disabilities. Employers' emergency planning policies should include accommodation for workers and site visitors with disabilities.

## **DISSEMINATION/KNOWLEDGE TRANSFER**

Overall, the interview process raised awareness in the different work sectors of the need for accommodating the needs of workers with disabilities. The employer's handbook will be distributed throughout British Columbia to the following workplaces: to the BC Coalition of People with Disabilities' network of over 1500 disability organizations; women's centres; municipalities (city halls) and regional districts; provincial government ministries; crown corporations; public agencies; union locals; and local business improvement associations. The handbook will also be available to download from our website and we will highlight the findings of our research in our publication *Transition* magazine, which has a circulation of 6,000 in BC. We will also conduct workshops and presentations for community organizations based on the employer's handbook.

We are also an affiliate of the Council of Canadians with Disabilities, which is a national umbrella group of provincial disability organizations, and we will distribute the findings of our research to our

provincial affiliates to use to enact change in other parts of Canada. The Coalition of People with Disabilities is also a member of the National Working Group on Emergency Preparedness and People with Disabilities with members from the disability and emergency sectors across Canada; and we will share what we have learned and created with this group.

## RECOMMENDATIONS

The literature review and key informant interviews highlight the need for more comprehensive workplace emergency planning that is inclusive of workers with disabilities in British Columbia. The BC Coalition of People with Disabilities recommends the following based on our research findings:

1. Incorporate planning for a broad range of workers with disabilities into all components of the workplace emergency plan, not just evacuations.
2. Use multiple methods of emergency notification to workers depending on the specific needs of the workforce.
3. Evacuation planning needs to go beyond leaving people with mobility disabilities in fire refuge areas – there must be plans to fully evacuate them from the building when there is imminent danger to their lives.
4. Utilize the employer's handbook, "Workplace Emergency Planning for Workers with Disabilities," to incorporate the needs of workers with disabilities in emergency planning.

## APPENDIX

### Research Interview Topics

1. Plan Development - Have workers with disabilities been involved in the development of the workplace plan?
2. Accommodations - Does the emergency plan make provision for a range of disabilities – use of low-tech and high-tech forms of communication, evacuation, areas of refuge, shelter-in-place?
3. Recovery - Are there provisions for workers with disabilities in the post-emergency recovery plan?
4. Plan maintenance – Is the plan revised as workers with disabilities conditions change or as new workers with disabilities are hired?

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