



JUSTICE INSTITUTE
of BRITISH COLUMBIA

Emergency Management Division

INTRODUCTION TO EMERGENCY MANAGEMENT IN BRITISH COLUMBIA

The *Introduction to Emergency Management in British Columbia* student manual is available for self-study or classroom instruction. It is a prerequisite for all PEP - sponsored emergency management courses and the JIBC emergency management curriculum.



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Produced for:

Provincial Emergency Program
Ministry of Public Safety and Solicitor General

by

The Emergency Management Division
Justice Institute of BC

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Published 2002. Revisions January 2005; August 2005.
Printed in Canada

Library and Archives Canada Cataloguing in Publication Data

Main entry under title:

Introduction to emergency management in British Columbia

ISBN 0-7726-5259-7

1. Emergency management - British Columbia.
2. Disaster relief - British Columbia. I. British Columbia. Provincial Emergency Program. II. Justice Institute of British Columbia. Emergency Management Division.

HV551.5.C3E43 2002

363.3'48'09711

C2004-960166-0

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Overview

About the Emergency Management Program

Without warning, disaster can strike and change a community forever. An earthquake can topple buildings and bridges. A forest fire can roar into a community, consuming everything in its path. A chemical spill can trigger the evacuation of a neighborhood or an entire town.

Disasters affect people and their communities in many ways. There may be injuries and death, destruction of homes, and displacement of families. Water, power, gas, telephone, and sewer systems may be cut off, and businesses may be disrupted.

No community in British Columbia is immune from the threat of disaster. However, emergency management can decrease the effects of a disaster. Emergency management is the process designed to help communities,

- Prepare for disasters
- Take measures to minimize the effects of a disaster should one occur (“mitigation”)
- Respond effectively to a disaster, and
- Recover as quickly as possible after the event.

Emergency management is about people - those who are affected by the emergency as well as those helping to mitigate, prepare for, respond to, and recover from the event.

The Emergency Management Program provides training on the fundamentals of emergency management for all hazards that may affect people, property, and the environment.

Training is provided to volunteers, personnel in municipal, provincial and federal governments, and the private sector. Specific training is also provided to volunteer search and rescue and emergency social service teams across the province.

Purpose of the Self-Study Guide

This self-study guide is intended for those who are involved in emergency management in British Columbia. It introduces the basic concepts of successful emergency management. While it does not attempt to cover everything you may encounter in helping your community, it will help you see emergency management from a broad perspective. It will also help you learn about the agencies, governments and organizations involved.

You may be taking the course on behalf of your company, organization, or community. Whatever your emergency management role, your contribution to the overall emergency management system is vital and it is our hope that this self-study guide will be a starting point to assist you in fulfilling your role.

Note: In order to receive credit and a Certificate of Achievement for this course, you must complete the test in Section 6 (use answer sheet located in back of inside cover). Return it along with the Student Information Form in the self-addressed envelope provided.

Section

1

Background

Upon completion of this section, you should be able to:

- √ Define “emergency management,” “emergency,” and “disaster”
- √ Describe the types of disasters that have occurred in British Columbia
- √ Discuss the evolution of modern emergency management

Introduction

This section defines key terms, describes some of the disasters that British Columbia has faced, and outlines the evolution of emergency management programs in British Columbia and Canada.

Emergency Management Definitions

Emergency management is the universal term for the systems and processes for mitigating, preparing for, responding to, and recovering from emergencies and disasters.

The terms “emergency” and “disaster” are often used interchangeably. However, a disaster is generally considered to have a greater impact than an emergency.

According to the BC *Emergency Program Act*:

Emergency means a present or imminent event that,

- a) Is caused by accident, fire, explosion, or technical failure, or by the forces of nature, and
- b) Requires prompt coordination of action or special regulation of persons or property to protect the health, safety, or welfare of people or to limit damage to property.

Disaster means a calamity that,

- c) Is caused by accident, fire, explosion or technical failure, or by the forces of nature, and has resulted in serious harm to the health, safety, or welfare of people, or in widespread damage to property.

A Short History of Disasters and Disaster Management in BC

Until the twentieth century, people survived with little more than their neighbours' help in times of disaster. A number of major disasters, two world wars, and the cold war changed how we deal with emergencies and disasters.

1868

Much of the gold rush town of Barkerville was consumed in a devastating blaze. There was no fire brigade; instead, the townsfolk risked their lives to protect others. The firestorm raged through the town and up to the mountain ridge above. Thousands were left homeless and slept in the open air until the town could be rebuilt.

1886

Fire swept through the newly incorporated City of Vancouver destroying approximately 800 buildings. At least 20 died.

1896

55 people died and 27 were seriously injured in the collapse of the centre span of the Point Ellice Bridge linking Victoria and Esquimalt. The dead, injured, and about 63 other survivors were riding in an overcrowded streetcar at the time. Residents from the Point Ellice area rushed into the waters to rescue the victims.

1898

Fire wiped out the business section, public buildings and residential areas of New Westminster. Three river steamers on the river also burned. The Mayor called for assistance from Vancouver's fire department, which sent 20 firefighters, 2 hose reels and a horse-drawn engine.

1903

In 90 seconds, much of Turtle Mountain collapsed in a massive rockslide that claimed at least 76 lives. The slide covered more than three square kilometres of the valley at Frank, Alberta, just east of the BC border. Local BC miners and other residents worked long hours alongside their Alberta neighbours to rescue those trapped beneath the rubble.

1908

The town of Fernie virtually disappeared in a major fire, and 10 people died in the flames. About 1,500 people escaped to communities to the east by boarding a freight train of the Great Northern Railroad. Help in the form of tents and supplies were sent from nearby communities in southern Alberta.

1910

More than 60 died in a midnight avalanche on the Canadian Pacific Railway line at Rogers Pass. Over 150 railway workers and volunteers came by train from Revelstoke to carry out rescue operations.

1912

Grass and forest fires starting along the railroad tracks were a serious problem in the first decade of the twentieth century. Under pressure from the BC government, the federal government revised the Railway Act to force railway companies to hire fire rangers to patrol the rail lines after trains passed. The area along the tracks also had to be kept clear of materials that burn easily, such as brush and long grass. This is an early example of mitigation and prevention that continues to today.

1926

A forest fire near Kootenay Crossing claimed four lives. The fire swept through the Vermilion and Kootenay River Valleys.

1927

The SS Prince Rupert, a passenger ship that plied the waters from Vancouver to Alaska, struck Ripple Rock in Seymour Narrows. Fog and strong tides contributed to the accident and, along with nearby cliffs, made rescue very dangerous. Luckily, all passengers were rescued unharmed. Almost thirty years later, Ripple Rock was blasted out of the water with the largest non-nuclear explosion in the world. This has made Seymour Narrows a much safer passageway, and serves as an excellent example of disaster prevention.

1938

A large fire destroyed the Canadian Pacific Railroad's Pier D on the Vancouver waterfront causing \$1 million damage. Huge crowds of spectators gathered to watch the fire, hampering access and complicating the work of firefighters.

1940

World War II spurred Vancouver to take civil defense seriously. As a major seaport, industrial centre, and terminus of two national railways, the city was considered a prime target for an air raid. An Air Raid Precautions Unit was organized, and drills took place regularly. The unit was organized according to the English system of appointing wartime fire wardens who were trained to carry out their duties during a state of emergency.

1946

A magnitude 7.3 earthquake occurred near Campbell River on Vancouver Island. Most of the damage occurred in the central island area, but the tremors were widely felt. Chimneys as far away as North Vancouver were damaged.

1948

The Fraser River flooded, damaging 2,000 homes and forcing the evacuation of 16,000 people. Damage was widespread within the river's catchment basin. The Fraser Valley, Kamloops, Quesnel, and Prince George all sustained heavy damage.

1949

A magnitude 8.1 earthquake, the largest earthquake ever measured in Canada, occurred offshore of the Queen Charlotte Islands. There was property damage on the lightly populated islands. Furniture moved about in homes in Terrace, and chandeliers swayed in Jasper, Alberta.

1962

On October 12, 1962, Hurricane Freda struck the coast of British Columbia. At Victoria on Vancouver Island, the winds reached sustained speeds of 74 km/h with gusts up to 145 km/hr. Damage estimates were \$10 million to store windows, small boats, hydro lines and gardens. Seven deaths were attributed to the storm.

1964

On Easter Sunday, one of the world's largest measured earthquakes occurred in Alaska. Within 4 hours a tsunami (7-metre wave) hit Port Alberni. It was the largest of its kind recorded in BC, and it caused over ten million dollars in damage.

1965

On February 18, an avalanche from the Leduc Glacier hit the camp of the Granduc Mining Co., 30 km northwest of Stewart near the Alaska border. It destroyed the southern portion of the camp and the buildings surrounding the portal. The property damage at Granduc was in excess of \$1 million. Sixty-eight men were caught in the avalanche. The search for survivors was greatly hampered by the mass of wreckage, poor visibility, snow, fog, and wind. During the operations, helicopter bombing at Granduc Mountain was carried out, probably the first time this control method was used. The last body was recovered on June 18, leaving 26 dead and 20 injured. Some 110 men escaped unharmed and were airlifted to Vancouver. The Granduc disaster was the largest of its kind to have occurred in Canada since the Rogers Pass disaster of 1910.

1974

On January 17 near Terrace, 118.1 cm of snow fell in 24 hours, setting the Canadian record for the greatest snowfall in 1 day, while the Terrace airport recorded about 2.1 m of snow in 11 days. The heavy snowfall was followed by a sharp rise in temperature. On January 22, a "dry" avalanche came down 45 km west of Terrace. It wiped out a service station and motel-restaurant complex "North Route" along Highway 16. Several vehicles were also buried. Seven people were killed. Highway 16 between Prince Rupert and Terrace was closed for 12 days. This slide heralded the beginning of the Ministry of Transportation's Avalanche program.

1978

On October 31, Terrace recorded 114.8 mm of rain in 24 hours, setting an all-time record, with 70-80 km/h winds. On November 1, another 89.1 mm of rain fell in a 24-hour period. Flooding occurred in Thornhill, Kitimaat Village, Terrace and Kitimat. Highway 16 east of Terrace was closed. There were 44 washouts between Terrace and Hazelton and three bridges went out. Highway 25 between Terrace and Kitimat was closed - in places the

highway was under 1.8 - 2.1 m of water. Rosswood and Cedarvale were without road access. Greenville was isolated for more than a week. Helicopter relief flights to outlying communities were grounded by poor visibility. The road leading to Stewart washed out, isolating the community and was still closed on November 8. The main power line to the Alcan smelter was threatened and the rail line between Smithers and Terrace was closed. The gas pipeline broke in the Telkwa Pass. 26 bridges were destroyed, and the total infrastructure damage for the Ministry of Transportation and Highways was over \$6 million.

1981

Debris torrents were a major problem for Highway 99 and the communities along Howe Sound in the 1980's. In the fall of 1981, nine people were killed as a result of a debris torrent at M Creek. A few years later, Lions Bay's Alberta Creek was cut in half by a debris torrent that destroyed four homes, killed two teenagers, and severed links to Squamish and other communities to the north.

1984

Most of the Pemberton Valley was flooded. Over 300 residents were evacuated, 176 homes were damaged, and millions of dollars were spent in disaster relief and recovery.

1988

The barge Nestucca spilled 875,000 liters of Bunker C oil off the coast of Washington. The oil washed up on the British Columbia coast, affecting over 150 kilometers of coastline.

1990

A massive rockslide at tunnel point on Highway 99 stranded hundreds of people and cut off the communities of Squamish and Whistler for a period of nine days. An emergency ferry service operated between Horseshoe Bay and Darrell Bay until the highway reopened. Hundreds of people stayed in a reception centre in Squamish. Emergency Social Service volunteers staffed this centre.

1994

The Garnet Fire started in Ellis Creek canyon near the city of Penticton, British Columbia. During the next two weeks over 3,000 residents were evacuated and 18

houses were reduced to ashes. The fire consumed over 5,500 hectares and cost millions of dollars before it was brought under complete control.

1996

Between Christmas and New Years, a heavy snowfall paralyzed the Lower Mainland and Victoria area. Thousands of travelers were stranded, and people with medical needs were unable to reach help. Over two million people were affected.

1998

During the seven-day period of July 30th to August 5th, there were 478 new forest fires across British Columbia. On July 29th a thunderstorm passed through the Salmon Arm area and numerous lightning strikes occurred. The ensuing forest fire was one the largest in recent memory. The potential evacuation of over 30,000 people in the area caused a massive response effort from numerous agencies from all levels of government. Eventually around 7,000 residents were ordered to evacuate their homes from the threat of the fire.

2001

On February 28, an earthquake measuring 6.8 on the Richter scale occurred near Olympia, Washington. Tremors were felt as far north as Kelowna. Power lines were downed in the Lower Mainland but there was very little structural damage. The relatively small amount of damage on both sides of the border and the efficient way the aftermath was managed are excellent examples of the value of emergency management.

2001

On September 11, as New York and Washington were attacked by acts of terrorism, numerous airlines were ordered to land at the closest airports across North America. The Vancouver International Airport was impacted with accommodating more than 45 large passenger jets that needed to make an unscheduled stop at the airport. The City of Richmond activated their Emergency Operations Centre to help coordinate the thousands of passengers that needed accommodation. Other communities were put on alert for potential non-scheduled airline landings.

2003 (Firestorm)

The forest fires that impacted areas across the province during the summer months of 2003 were the most destructive in the history of British Columbia. The Provincial State of Emergency was in effect for 6 weeks. Over 50,000 people were evacuated and a further 50,000 were put on evacuation alert. There were 334 homes and 10 businesses that were destroyed by the interface forest fires. Over 7,600 wild land firefighters, 3,150 out of province firefighters, 1,300 structural fire fighters and 2,000 military personnel were deployed to fight the 2,518 forest fires. Over 10,000 emergency volunteers including Emergency Social Services, Search and Rescue, Amateur Radio and PEP Air were also used in response to forest fires.

2004

Although the Avian Influenza response that took place in the Spring of 2004 was led by the Canadian Food and Inspection Agency (CFIA), the Province assisted with the containment and eradication of the disease. During April and May, over 19 million chickens and other birds in the Fraser Valley were culled to prevent the spread of the influenza. The provincial emergency structure, with provincial staffing levels peaking at 120 staff, proved to have significant economic benefits.

2005

Between January 17 and January 31, 2005, a severe weather event caused major flooding, ice jams, landslides and avalanches throughout the province. During that time, six local declarations of emergencies were declared and six provincial regional emergency operations centres were activated. Over 500 people were evacuated and provided emergency social services by local volunteers.

The Evolution of Modern Emergency Management

1917

On the morning of December 6, the largest explosion in history to that time occurred in the city of Halifax. It was the most devastating disaster to strike an urban area in North America, and we are still learning from that disaster.

Approximately 225 tons of high explosives blew up in a ship moored in the harbour. 300 acres were leveled, over 2,000 people were killed, 6,000 were injured, and 10,000 were rendered homeless out of a population of 50,000. The explosion created a tidal wave that swept over the piers and embankments into the streets, drowning nearly 200 people. To complicate relief efforts, freezing rain, thunderstorms, and blizzards followed by bitterly cold weather descended on Halifax during the days immediately following the explosion. The city struggled to cope with the devastation and help came from as far away as Boston.

The Halifax explosion raised awareness that such disasters could occur, necessitating disaster relief.

World War I

Federal government assistance for disaster relief increased during the World War 1 era.

World War II

During World War II, the federal government mobilized resources to help sustain the war effort. Civil defense and citizen teams were formed to help prepare the public for a possible enemy attack. The model of emergency management was primarily military, with a heavy focus on enlisting volunteers to help support the war effort.

1950's and 60's

The Cold War and the threat of nuclear attack encouraged the further development of civil defense and citizen teams. Resources were stockpiled, a practice now limited to medical supplies and personal earthquake preparations. The national focus on emergency management changed to a provincial one, with the provinces assuming a greater role through legislation.

1970's

New hazards, including terrorism and technological disasters, began to appear worldwide. The focus of emergency management shifted from civil defense to government programs. The provinces became more active in emergency planning at all levels. At the same time, municipalities also assumed a larger role.

1980's

Research on disasters changed how we think about emergency management. The earthquake that struck San Francisco on October 17, 1989 was the first disaster televised while in progress. This event is considered to have sparked the rapid development of emergency management in North America.

1990's

The emergency management model became widely recognized. In 1993, the British Columbia *Emergency Program Act* was introduced. It provided a new framework for emergency management and required municipalities to have their own emergency plans.

2000's

Attacks on the World Trade Centre and the Pentagon in 2001, as well as in London in 2005, have increased the profile of emergency management in responding to the threat of terrorism worldwide.

The unprecedented loss of life and devastation of the tsunami that hit South Asia has alerted BC's coastal communities to the need for continued preparation and planning for this type of disaster.

Severe Acute Respiratory Syndrome (SARS), West Nile Virus and the risk of Pandemic Influenza brought to the forefront the need for Health Emergency Management professionals to build upon existing health response frameworks and strengthen ties with emergency management bodies to better track and manage the consequences of these and other types of public health related emergency events.



Take a few moments now to answer the following question.

What emergencies or disasters do you recall occurring in your community or region?



Section

2

Legislation and Regulations

Upon completion of this section, you should be able to:

- √ Describe the federal legislation that governs emergency management in Canada
- √ Describe the provincial legislation that governs emergency management in British Columbia
- √ Describe local authority bylaws for emergency management
- √ Describe regulations that apply to the private sector, business, industry, health and schools for emergency management

Introduction

In Canada, legislation and regulations outline emergency management responsibilities of the federal government, provincial governments, local authorities and the private sector.

Federal Government

Legislation

Two important federal statutes set out the broad responsibilities of the Government of Canada for emergency preparedness and response. These Acts, both adopted in 1988, are the *Emergencies Act* and the *Emergency Preparedness Act*.

Emergencies Act

The Emergencies Act defines four categories of emergencies in which the federal government may be required to act:

- Public welfare emergencies (natural or human disasters)
- Public order emergencies (threats to Canada's internal security such as insurrections or acts of terrorism)
- International emergencies (external threats to Canada or its allies), and
- War.

Emergency Preparedness Act

The Emergency Preparedness Act defines what the federal government and its institutions must do to ensure that they are always ready in an emergency.

First Nations

The Minister of Indian and Northern Affairs Canada (INAC) is responsible for identifying the civil emergency contingencies that are within or related to First Nations communities, and for planning and preparing for civil emergencies. The Government of Canada and the Province of BC recognize the benefits of coordinated

aboriginal, federal and provincial emergency response and recovery plans and procedures, and have agreed to work together in assisting First Nations with the provision of response and recovery services.

Through an agreement with INAC, when immediate action is required to preserve life or property on First Nations Reserves and when local bands so request, PEP will assist, support or arrange for such required emergency measures. This may include coordinating volunteer, municipal, provincial, federal or other agency support.

PEP administers all claims and payments related to emergency response and disaster financial assistance on behalf of First Nations groups in the same manner as for local authorities, with the understanding that all costs incurred are refundable to the Province from INAC.

Provincial Government

Legislation

The government of British Columbia has an active and comprehensive emergency management program. Responsibilities are shared among all provincial ministries and crown corporations. The legislation directing this is the *Emergency Program Act*. The *Act* sets out the preparedness, response, and recovery roles and responsibilities of the province and local authorities.

Emergency Program Act

BC's *Emergency Program Act* emphasizes public safety in emergencies or disasters. The *Emergency Program Act* established the Provincial Emergency Program (PEP) and gave PEP certain powers and duties. The *Act* addresses the following areas of responsibility:

- Clarifies the roles and responsibilities of a local authority and the provincial government
- Provides extraordinary power to a local authority and / or the provincial government if required
- Requires a local authority to create and maintain an emergency management organization
- Enables provision of Disaster Financial Assistance to victims of all disasters, and
- Provides exemption from civil liability to all emergency service workers.

The British Columbia Emergency Program Act includes the following regulations:

Emergency Program Management Regulation

This regulation outlines the emergency planning requirements for each provincial minister.

Local Authority Emergency Management Regulation

This regulation outlines the roles and responsibilities of a local authority. It includes the powers and duties of a local authority as well as the components of a written local emergency plan.

- A local authority must establish and maintain an emergency management organization.
- A local authority may:
 - Appoint committees it considers necessary or desirable to advise or assist the local authority
 - Appoint a coordinator for the emergency management organization, and
 - In writing, delegate any of its powers and duties under the Act to the committee, emergency management organization, or coordinator (except the power to make a Declaration of a State of Local Emergency).
- A local authority must prepare local emergency plans to include:
 - Preparation for emergencies and disasters
 - Response to emergencies and disasters, and
 - Recovery from emergencies and disasters.

Compensation and Disaster Financial Assistance Regulation

British Columbia has a program to help disaster victims cope with the cost of repairs and recovery from disaster-related property damage.

The Disaster Financial Assistance Program (DFA) is administered by the Ministry of Public Safety and Solicitor General through the Provincial Emergency Program under the authority of the Compensation and Disaster Financial Assistance Regulation.

Powers of the Province and Local Authorities as defined in the Emergency Program Act

After a declaration of a state of emergency (province) or state of local emergency (local authorities) is made, the following procedures may be implemented.

The province may:

- a. Implement a provincial emergency plan or any provincial emergency measures
- b. Authorize a local authority to implement a local emergency plan or emergency measures for all or any part of the jurisdictional area for which the local authority has responsibility
- c. Require a local authority for a municipality or an electoral area to implement a local emergency plan or emergency measures for all or any part of the municipality or electoral area for which the local authority has responsibility.

The province and / or local authorities may:

- d. Acquire or use any land or personal property considered necessary to prevent, respond to or alleviate the effects of an emergency or disaster
- e. Authorize or require any person to render assistance of a type that the person is qualified to provide or that otherwise is or may be required to prevent, respond to or alleviate the effects of an emergency or disaster
- f. Control or prohibit travel to or from any area of British Columbia
- g. Provide for the restoration of essential facilities and the distribution of essential supplies and provide, maintain and coordinate emergency medical, welfare and other essential services in any part of British Columbia
- h. Cause the evacuation of persons and the removal of livestock, animals and personal property from any area of British Columbia that is or may be affected by an adequate care and protection of those persons, livestock, emergency or a disaster and make arrangements for the animals and personal property
- i. Authorize the entry into any building or on any land, without warrant, by any person in the course of

implementing an emergency plan or program or if otherwise considered by the minister to be necessary to prevent, respond to or alleviate the effects of an emergency or disaster

- j. Cause the demolition or removal of any trees, structures or crops if the demolition or removal is considered by the minister to be necessary or appropriate in order to prevent, respond to or alleviate the effects of an emergency or disaster
- k. Construct works considered by the minister to be necessary or appropriate to prevent, respond to or alleviate the effects of an emergency or disaster
- l. Procure, fix prices for or ration food, clothing, fuel, equipment, medical supplies or other essential supplies and the use of any property, services, resources or equipment within any part of British Columbia for the duration of the state of emergency.

Declaration of State of Local Emergency

A local authority or the province NEED NOT declare a state of local emergency for the following:

- To implement part or all of their Emergency Response and Recovery Plan
- To gain liability protection under the BC Emergency Program Act
- To qualify for disaster financial assistance under the *BC Emergency Program Act*.

Formal declarations should only be made when the extraordinary powers enabled by the legislation are required to effectively respond in an extreme emergency or disaster. See Appendix A for steps in declaring a state of local emergency.

Local Authority Legislation

Emergency Bylaw

The foundation of the local emergency program is the emergency bylaw. Each local authority (municipality or regional district) must pass an implementing bylaw authorizing the development and maintenance of an emergency program. In addition, each regional district

must pass a separate bylaw to extend the service throughout the regional district.

An emergency bylaw usually:

- Defines certain emergency management requirements for the municipality
- Establishes the emergency management organization (i.e., emergency planning committee)
- Sets out the terms of reference for the emergency management organization
- Lists the duties and responsibilities of the emergency management organization, including such things as:
 - Hazard, risk and vulnerability analysis
 - Plans for preparation, response and recovery
 - Plans and processes for training and exercises
 - Resources acquisition
 - Response and recovery implementation
 - Warning and protection procedures
 - Procedures for restoration of essential services
- Outlines the powers of council, including declarations of state of local emergency
- Funds emergency management
- Authorizes mutual aid agreements, and
- Provides an interface between the emergency management organization and other municipal departments and municipal agencies involved in mitigation or prevention measures.

Private Sector, Business, Industry, Health and Schools

Regulations

The Workers' Compensation Board (WCB) of British Columbia requires procedures to be in place for **Emergency Preparedness and Response** in the workplace.

Section 4.13(1) of the Workers' Compensation Board of British Columbia, *Occupational Health and Safety Regulation* states, "The employer must conduct a risk assessment in any workplace in which a need to rescue or evacuate workers may arise."

If a worker is required to assist others who may need physical assistance during an evacuation (such as in care homes or schools), written rescue and evacuation procedures must be developed. The procedures also need to be practiced so workers know their responsibilities and the procedures and equipment to be used.

At least once each year emergency drills must be held to ensure awareness and effectiveness of emergency exit routes and procedures, and a record of the drills must be kept.

All workers must be given adequate instruction in the fire prevention and emergency evacuation procedures applicable to their workplace.

Detailed information concerning this regulation can be obtained from a local Workers' Compensation Board office or via the Internet at the following website:

<http://www.worksafebc.com>.

In addition to the Workers' Compensation Act and its Regulations, there is another legislation that establishes emergency management requirements for a broad spectrum of private sector businesses and utilities to ensure public safety. Examples of some are the Dam Safety, Safe Drinking Water, and Sour Pipeline Regulations.



Take a few moments now to answer the following questions:

1. What four categories of emergencies may the federal government be required to act upon?



2. What five areas of responsibility are specified in the BC Emergency Program Act?



Section

3

Emergency Management Programs

Upon completion of this section, you should be able to:

- √ Describe the function of Public Safety and Emergency Preparedness Canada (PSEPC)
- √ Describe the mission and organization of the Provincial Emergency Program
- √ Discuss the purpose, response goals and components of BCERMS
- √ Describe the organization and function of a local authority emergency management program
- √ Describe what should be included in an emergency management program for private sector, industry, business, health and schools

Introduction

In Canada, we have an emergency management model that includes everyone from individuals and families to the federal government:

- At the local level, Canadians are expected to plan for and deal with everyday emergencies they may face. Individuals and families, occasionally with help from neighbours, plan and respond to a wide range of emergencies such as illnesses and car breakdowns.
- When the emergency is too great for an individual to handle, the municipality steps in to help. Help can include anything from a fire truck attending a house fire to the management of a large-scale evacuation of the community.
- When municipal resources and capability are overwhelmed, the province provides the necessary resources to support the emergency or disaster.
- When provincial resources are exhausted, the province may call on the federal government for help. The federal government may contribute its own supplies, those of other provinces, or the international community.

Federal Government

Public Safety and Emergency Preparedness Canada (PSEPC)

In February of 2001 the Prime Minister of Canada announced the establishment of the *Office of Critical Infrastructure Protection and Emergency Preparedness* (OCIPEP), changing its name to Public Safety and Emergency Preparedness Canada (PSEPC) in early 2004. Its role is to implement a comprehensive approach to protect Canada's critical infrastructure and enhance Canada's emergency management framework.

As we increase our use of technology, the way we will be affected by disasters - whether natural or technological in nature - is expected to change significantly. Consider how technology has already permeated our quality of life.

Banking, telephones, computer systems, electricity and transportation are all heavily reliant on information technology. And there are new threats and vulnerabilities that can affect critical infrastructures in these areas that are vital to the safety, security and economic well-being of Canadians.

Public Safety and Emergency Preparedness Canada will:

- a. Promote, support and coordinate critical infrastructure protection in six key areas (energy and utilities; communications; financial / banking services; transportation; safety such as nuclear safety, search and rescue, and emergency services; and government services) and enhance emergency management (mitigation, preparedness, response and recovery)
- b. Promote dialogue among Canada's critical infrastructure owners and operators and foster information sharing on threats and vulnerabilities
- c. Monitor and coordinate a national program of cyber and physical incident response and recovery
- d. Work with governments and other organizations to develop a greater national capacity for economic and social resiliency against disasters
- e. Support research and development
- f. Provide related training and education, and
- g. Deliver public and stakeholder awareness programs.

Provincial Government

Provincial Emergency Program (PEP)

The Provincial Emergency Program (PEP), Ministry of Public Safety and Solicitor General maintains effective awareness, preparedness, response and recovery programs to reduce the human and financial costs of disasters in BC. In this role, PEP works closely with local authorities, provincial ministries and agencies, federal departments and volunteers.

PEP's mission is to enhance public safety and reduce property and economic loss from actual or imminent emergencies or disasters by:

- Mitigating the effects of emergencies and disasters through education and awareness
- Promoting preparedness through planning, training and exercising
- Coordinating and assisting in response activities, and
- Developing and implementing recovery measures.

Public Awareness

PEP takes an active role in increasing public awareness of the risks of disaster and the need for preparedness. Brochures, posters and presentations are part of this awareness program. PEP also organizes Emergency Preparedness Week, an annual, province-wide event to encourage individual preparedness initiatives in the home, workplace and community. Information on PEP can be found on their website at www.pep.bc.ca.

Preparedness

Through its headquarters in Victoria and its regional offices across the province, PEP helps local authorities:

- Analyze hazards, risks and potential impacts
- Develop and test emergency plans, and
- Train and organize emergency staff and volunteers.

PEP may provide financial assistance for these activities through the federal / provincial Joint Emergency Preparedness Program.

Provincially, PEP develops long-term strategies and contingency plans with various ministries and agencies. PEP helps in determining who will do what in the event of an emergency or disaster that cannot be handled locally.

PEP also works with the federal government on preparedness initiatives, such as the National Earthquake Support Plan. It also provides emergency planning advice and assistance to industry.

Response

PEP maintains a 24-hour Emergency Coordination Centre. Through a toll-free number, local authorities, agencies, and individuals can report incidents such as floods, earthquakes, landslides, industrial accidents, lost persons, oil spills, and marine accidents. In a typical year, more than 3,000 events are reported.

A Task Number may be issued at the discretion of the Provincial Emergency Program staff for an incident that may involve financial expenditures in British Columbia. Usually the Operations Officer at the Emergency Coordination Centre will receive a telephone call about an incident. A task number with a certain dollar amount may be issued depending on the requirements of the people impacted or agencies responding to the incident.

In the event of a major disaster or emergency, PEP, in cooperation with other ministries, may open a Provincial Regional Emergency Operations Centre (PREOC). PREOC's responsibility includes coordinating provincial / regional response and providing a liaison with local authorities and agencies.

In the event that a PREOC needs additional support and / or multiple PREOCs are activated (there are six potential PREOC facilities throughout the province), the province will establish a Provincial Emergency Coordination Centre (PECC), responsible for coordinating provincial and federal support.

Recovery

Recovery programs help restore communities and the environment after an emergency or disaster. PEP may coordinate recovery efforts with various agencies, as required. PEP is also responsible for administering the Disaster Financial Assistance (DFA) Program designed to replace or restore items essential to a home, livelihood, or community.

Support to Volunteers

Thousands of emergency volunteers across the province provide critical services in the areas of emergency preparedness and response. PEP supports volunteers registered with their local emergency program by providing the following:

- Worker's Compensation Board (WCB) coverage
- Third party liability insurance

- Some direct funding
- Training for some volunteer groups.

PEP also has numerous volunteer recognition programs, including an annual award ceremony.

Volunteers supported by PEP work in Amateur Radio, PEP Air, Search and Rescue, Road Rescue and Emergency Social Services.

Provincial Emergency Radio Communications Service (PERCS)

PERCS is an emergency radio communications service staffed by amateur radio volunteers. PEP offers advice and administrative support to PERCS activities.

Most radio amateurs in PERCS provide emergency communications at the municipal level. A smaller group provides communications services for PEP itself.

Provincial Emergency Program Air (PEP Air)

PEP Air consists of volunteers who assist the other arms of PEP as well as the Search and Rescue Squadrons of the Canadian Armed Forces, the Canadian Coast Guard and the Canadian Marine Rescue Association to locate missing or distressed persons, aircraft or vessels.

Volunteer aircrews provide essential local knowledge during searches for missing aircraft and people. They also assist in scanning remote areas.

Search and Rescue (SAR)

SAR operations within British Columbia fall into three basic categories: Air SAR, Ocean SAR, and Ground and Inland Waters SAR.

When a SAR emergency arises, the primary responsibility for the response depends on the category of search and / or rescue involved:

- Both Air and Ocean SAR are a federal responsibility.
- Air SAR is the responsibility of the Canadian Armed Forces and is supported by PEP Air.
- Ocean SAR is the responsibility of the Canadian Coast Guard and is supported by the volunteer Canadian Coast Guard Auxiliary.

- Both Air and Ocean SAR are coordinated by the Rescue Coordination Centre (RCC) located in Victoria.
- Ground and Inland Water SAR within BC is the responsibility of the police having jurisdiction, usually the RCMP or municipal police force. PEP provides support in coordinating the operational response of local SAR volunteers groups when requested.
- Ground and Inland Water SAR is coordinated by the PEP Emergency Coordination Centre (ECC).

PEP supports authorized SAR activities by:

- Providing individuals with WCB coverage, third party liability insurance, and legal representation if losses or claims arise out of authorized operations and pre-approved training tasks
- Reimbursing SAR volunteers for expenses incurred during operations and sometimes for training
- Replacing some or all of essential equipment lost or damaged during an operation (but not if the loss occurred during training)
- Providing a comprehensive standards and training program, and
- Providing funding opportunities under the New Initiative's Fund (NIF).

Road Rescue

Road Rescue consists of volunteers throughout the province who rescue injured people from motor vehicle accidents. This is a very demanding and technically specialized rescue service. These volunteers work with powerful pieces of equipment such as the "Jaws of Life." PEP support for these activities is provided in the same way as for SAR.

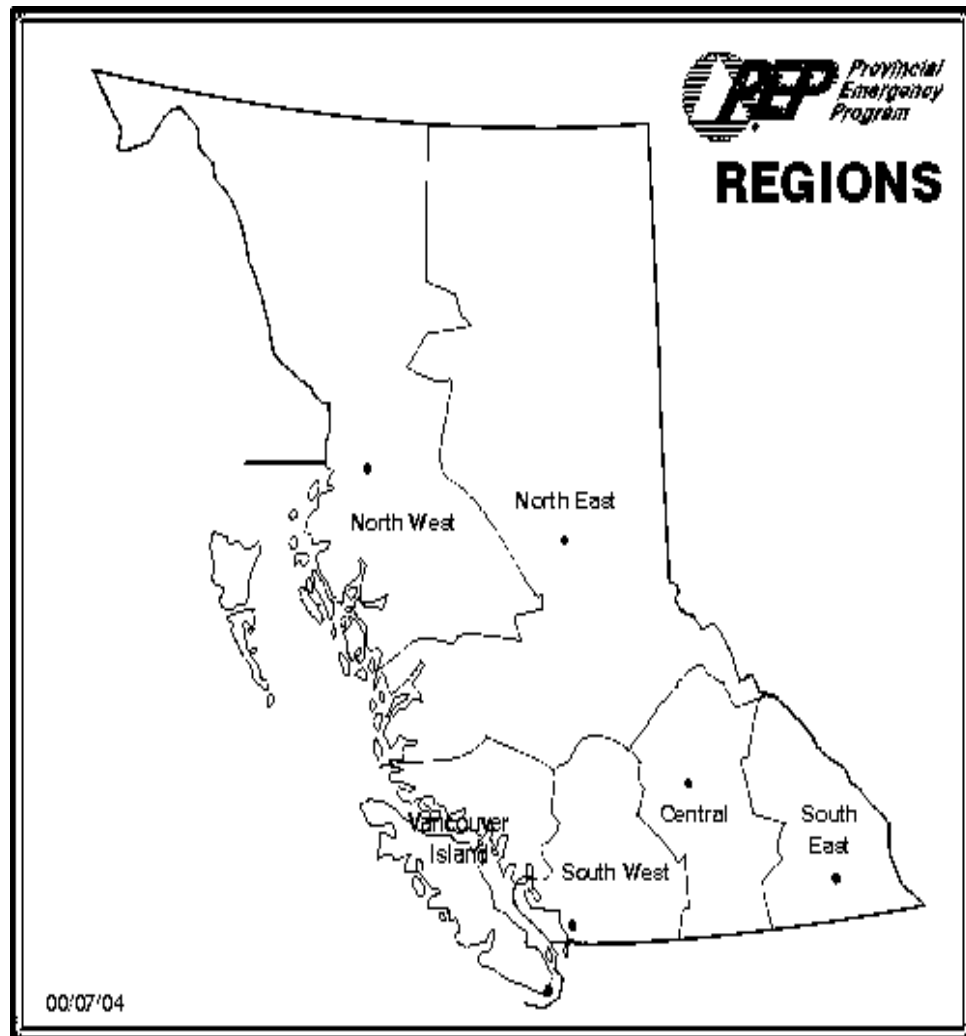
Emergency Social Services (ESS)

ESS volunteers in communities throughout BC are trained to provide displaced people with immediate emergency needs when disasters happen.

PEP provides consultation, training and technical support for volunteers, as well as WCB coverage, third party liability insurance, and legal representation if losses or claims arise out of authorized operations or pre-approved training tasks. Out-of-pocket expenses may also covered by PEP during an authorized operation.

PEP Organization

The Provincial Emergency Program is located within the Ministry of Public Safety and Solicitor General. The headquarters office is in Victoria on Vancouver Island and there are six regional offices servicing all areas of the province.



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PEP Regional Offices	Regional Districts It Serves
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Other Provincial Agencies Involved In Emergency Management

In addition to PEP (Ministry of Public Safety and Solicitor General), other provincial ministries and crown corporations also have emergency management responsibilities.

Some ministries are responsible for leading the planning for, and response to, specific types of emergencies or disasters. The Ministry of Forests, Protection Branch is responsible for response to wildfires (forest fires), and the Ministry of Transportation is responsible for response to major flooding. The Ministry of Public Safety and Solicitor General (PEP) is responsible for response to hazards, such as tsunamis, that are not normally associated with a particular ministry.

Interagency Emergency Preparedness Council (IEPC)

The IEPC coordinates emergency plans and procedures for the provincial government. It has representatives from most ministries and crown corporations.

One of the major accomplishments of the IEPC is the development and adoption of the British Columbia Emergency Response Management System (BCERMS).

British Columbia Emergency Response Management System (BCERMS)

The British Columbia Emergency Response Management System (BCERMS) is a comprehensive management scheme that ensures a coordinated and organized provincial response and recovery to any and all emergency events. Specifically, BCERMS is designed to:

- Standardize the process for the delivery of a multi-ministry, multi-agency coordinated response to all emergencies
- Guide key ministries and crown corporations in preparing their emergency plans, and
- Clarify the functions of various supporting provincial ministries during a response.

BCERMS is based on the Incident Command System (ICS), originally developed as a fire response management system in the United States. ICS has been widely adopted by first responders and emergency management programs throughout North America and uses the following structure to coordinate response activities: management, operations, planning, logistics and finance / administration. It has been thoroughly tested in a range of emergencies and is designed to provide an appropriate emergency response no matter what type of emergency is involved, and no matter how many agencies or jurisdictions are involved.

Response Goals

The response objectives of BCERMS, in order of priority, are to:

- Provide for the safety and health of all responders
- Save lives
- Reduce suffering
- Protect public health
- Protect government infrastructure
- Protect property
- Protect the environment
- Reduce economic and social losses.

BCERMS Components

The components of BCERMS are:

- **Operations and Control**, which:
 - Provides a common organizational structure and control method for the management of personnel, equipment, facilities and resources
 - Enhances communication between agencies responding to the emergency or disaster, and
 - Provides a site response structure based on the Incident Command System
- **Qualifications**, which establishes a standard for the management of each area and level within the emergency response management system
- **Technology**, which establishes the use of common technology in support of emergency operations

- **Training**, which mandates the training of designated personnel to meet an established set of criteria
- **Publications**, which mandates distribution of a common set of forms, reports, instructional terminology and other written material in support of the standard.

Joint Emergency Preparedness Program (JEPP)

The Joint Emergency Preparedness Program (JEPP) is a federal cost-sharing program with the province and local authorities that encourages the provinces and territories to undertake emergency preparedness projects that support national priorities.

JEPP is managed at the federal level by PSEPC and at the provincial level by PEP.

JEPP funding is available to provincial government ministries, incorporated municipalities, regional districts, and First Nations. These agencies must apply to the provincial government through PEP for JEPP cost-share funding.

Additional information about JEPP can be obtained from PEP regional offices or PEP website at www.pep.bc.ca.

Local Authority

Note: Emergency programs at the local level are similar for Local Authorities as for First Nations governments. Although the Emergency Program Act does not legislate emergency program roles and responsibilities for First Nations governments outside of treaty, First Nations governments may adopt these roles and responsibilities through Band Council Resolution or bylaw. Also, First Nations governments in the treaty process are being granted Local Authority status. For the purposes of this section, "Local Authority" will refer to Local Authorities and to First Nations granted that status under treaty, and will serve as a guideline to First Nations on reserve.

Emergency Management Program

People look first to the local authority (a municipality or regional district) for help in case of an emergency or disaster. They want information about what is happening and what to do. They may need direction and assistance to evacuate their homes. They may request support for themselves and their families.

A local authority has certain roles and responsibilities under the Emergency Program Act. Most activities in emergency management happen at the local authority level: decisions on mitigation and preparedness activities; most response activities; and most recovery efforts.

Emergency Program Coordinator

An Emergency Program Coordinator is responsible for the management / coordination of emergency preparedness, response, and recovery activities on behalf of the local authority.

A Coordinator's duties may include the following:

- Develop and maintain community emergency plans
- Identify emergency resources (both internal and external)
- Develop and conduct public education materials and programs
- Provide training for community staff and volunteers
- Develop and conduct training exercises, and
- Assist with emergency operations.

Emergency Planning Committee

The Emergency Planning Committee is comprised of the various agencies, personnel and volunteers responsible for planning a community's emergency management program. The Emergency Program Coordinator usually chairs this committee.

The minimum membership of an emergency planning committee is usually:

- Emergency Program Coordinator
- Senior representative from all municipal departments (fire department, public works, engineering, finance, etc.)
- Administrator
- Law Enforcement representative
- BC Ambulance Service representative
- Emergency Social Services Director
- Search and Rescue Coordinator
- Representative from Communications

- Representative from the Regional Health Authority, and
- Representative from the School District.

Others who may be committee members or may attend relevant meetings include representatives from:

- Provincial and federal agencies
- Utilities
- Community groups
- Volunteer organizations
- Neighbouring First Nations
- Business and industry
- Mutual aid partners.

Emergency Planning Committees usually meet monthly. They may have subcommittees to deal with specific aspects of planning, response operations, training / exercises, and / or recovery.

The Planning Process

The process of developing an emergency plan is the responsibility of the local authority. The local authority must support the idea of emergency planning, provide funding for it, and appoint the members of the emergency planning committee who initiate the process. When the committee's work is completed, the local authority is asked to approve the emergency plan.

No emergency plan can predict every eventuality. The purpose of the planning process is to produce a realistic analysis of the hazards a community faces, and develop a program of emergency responses that will deal effectively with both anticipated and unanticipated hazards.

Many of the principles of emergency planning for a single community can also apply to planning done by other agencies or institutions, and to a certain extent to emergency planning in business and industry.

Local Emergency Plans

Most local authorities have at a minimum an emergency response plan. The Emergency Response Plan guides the actions of a community during an emergency or disaster response. Others have more comprehensive plans that include mitigation, preparedness, and recovery as well as response. A great deal of effort goes into developing a plan and continuously updating the plan.

A local authority's emergency plan must reflect (as listed in the Emergency Program Act):

- The potential emergencies and disasters that could affect all or any part of the local authority's jurisdictional area
- The local authority's analysis of the relative risk of occurrence and the potential impact on people and property of the emergencies or disasters
- The commitment of the local authority to provide policy guidance and direction to the emergency management organization
- The procedures by which that guidance and direction are to be provided
- The requirement for a periodic review and update of the local emergency plan, and establishment of a procedure for that review and revision
- A program of emergency response exercises and training for all emergency response staff to whom responsibilities are assigned in the plan
- Procedures by which emergency resources, including personnel, equipment, facilities, and financial resources, may be obtained from sources within or outside of the jurisdictional area
- Procedures by which the plan is to be implemented
- Procedures by which those persons who may be harmed or who may suffer loss are notified of an emergency or impending disaster
- Procedures for the coordination of the provision of food, clothing, shelter, transportation and medical services to victims of emergencies and disasters, whether that provision is made from within or outside of the local authority
- Priorities for restoring essential services provided by the local authority that are interrupted during an emergency or disaster
- Recommendations to service providers regarding the priorities for restoring essential services not provided by the local authority that are interrupted during an emergency or disaster, and
- Any confirmed, potential, or anticipated assistance and resources of other levels of government or other non-government bodies.

Evacuation Planning

Every community needs an evacuation plan. In British Columbia there are several legal Acts to authorize evacuations, and these vary from hazard to hazard. These include:

- Emergency Program Act (Local & Provincial declarations)
- Fire Services Act
- Wildfire Act
- Health Act
- Child Protection Act, and
- Petroleum and Natural Gas Act.

In some cases, if evacuees have to drive through a plume of hazardous gases, it may be safer for them to take shelter in their homes. In other cases, clear and obvious risks may indicate the need for evacuation, or a precautionary evacuation may be justified to avoid an imminent risk.

Evacuation plans should provide for both minor evacuations of a limited area (for example, a fire or gas leak) and major evacuations affecting a large part of the population (for example, a major chemical release). Plans should be flexible enough to accommodate both sudden emergencies and situations that provide more warning.

Evacuation plans must also provide for two distinct groups of people: the "population at risk," and the "host population" who will look after the evacuees.

Response

Site

The site is the first level of response activity. 90 to 95% of all incidents are handled effectively at the site level. The recommended management system used to respond to site activities is BC's incident command system. Typical agencies that respond to a site include police, fire and ambulance. In the event that an emergency situation necessitates additional support (i.e., resources, agency coordination etc.), an emergency operations centre (EOC) may be activated.

Emergency Operations Centre

An Emergency Operations Centre is a designated facility established by a community, jurisdiction, and / or agency to support disaster response and recovery. It provides

support to the incident site and coordinates and manages all non-site activities.

Emergency Operations Centre responsibilities include:

- Policy direction and support
- Information collection, evaluation and display
- Coordination of agencies and operations
- Establishment of priorities
- Resource management
- Communications, and
- Public information and warning.

Training, Public Awareness, and Exercises

Training

Local Authorities are required (under the Emergency Program Act) to establish an emergency management training program for their staff, volunteers and the general public. The Provincial Emergency Program supports local authority training by sponsoring courses in each region of the Province.

Training programs are designed to prepare communities to respond to and recover from disasters they may face. This involves:

- Training community staff and volunteers in preparedness, response and recovery activities
- Educating schools, health care providers, utility agencies, industry, businesses and others in what plans the local authority has developed for responding to disasters and what role they play in the emergency management program, and
- Educating the general public as to the types of disasters that may occur, how to prepare for, and sustain themselves in the event such disasters occur.

Public Awareness

As part of an on-going training program, local authorities also provide preparedness brochures, posters and seminars of interest to help increase public awareness of emergency management initiatives and encourage participation in their various volunteer programs (i.e., ESS, SAR, Emergency Radio Communications, Road Rescue and Neighbourhood Programs).

Each year the first full week in the month of May is proclaimed as “Emergency Preparedness Week.” This week is recognized across Canada and is an opportunity for local authorities, provincial and federal government agencies to highlight their emergency management programs and educate people in emergency preparedness.

Exercise Programs

After an emergency plan has been developed, the plan and all personnel involved must be exercised to ensure that the plan has the potential to succeed when implemented. Testing is accomplished by exercising the plan, and no plan is complete until it has been studied and tested.

Specifically, exercising is an activity designed to:

- Promote emergency preparedness
- Test or evaluate emergency operations, policies, plans, procedures or facilities
- Train personnel in emergency management duties
- Demonstrate operational capability
- Reveal planning weaknesses
- Reveal resource gaps
- Improve coordination
- Clarify roles and responsibilities
- Improve individual performance
- Develop enthusiasm, knowledge, skill and willingness to participate in emergencies, and
- Gain public recognition of the emergency management program.

Individual exercises are part of an overall exercise program. The exercise program consists of several types of exercises chosen to develop and reinforce emergency response knowledge, skills and abilities.

There are five different types of exercises:

- **Orientation**
The orientation seminar is used to introduce participants to, or refresh them on plans and procedures and is conducted through the use of lectures, panel discussions, media presentations, or talking through the various scenarios and required actions.

- **Drill**
Drills test a single emergency response function and often involve actual field response. Their effectiveness lies in focusing on a single or relatively limited part of the response system in order to evaluate and improve it.
- **Tabletop**
In tabletop exercises, actions and discussion are based on a described emergency scenario, supported by additional problem statements. Participants practice problem solving for emergencies by discussing actions and decisions and how appropriate they were.
- **Functional Exercise**
The functional exercise is a simulation of an emergency that includes a description of the situation, a timed sequence of messages, and communication between players and a simulation group. Participants practice coordinated, effective response in a time-pressured, realistic yet simulated emergency.
- **Full-Scale Exercise**
The full-scale exercise is as close to reality as possible. It adds a field component to a simulated functional exercise through actual and simulated messages. It tests the actual deployment of seldom-used resources and often involves the general public and media.

Volunteer Programs

Neighbourhood Emergency Preparedness Programs

A BC Neighbourhood Emergency Preparedness Program is made up of individuals and neighbours working in partnership towards emergency preparedness. Such programs are an excellent example of how individuals and groups can work within their community to prepare for an emergency or disaster.

Those who have experienced disasters such as earthquakes, floods or major fires have witnessed the way in which neighbours naturally come together to help one another. A team of neighbours with a variety of skills will have a much greater chance of survival following a disaster than individuals coping on their own. Working together according to a pre-arranged plan will likely speed up recovery as well.

The Neighbourhood Preparedness Program involves both personal preparedness as an individual or family, and planning and training as a neighbourhood to respond safely and effectively during a disaster. Program participants learn to:

- Minimize existing hazards around the home or worksite
- Store emergency supplies
- Act quickly and appropriately when any emergency strikes
- Be prepared to evacuate the home, neighbourhood or worksite, and
- Feel more confident because they are prepared and self-reliant.

Participants also learn how to organize themselves into Neighbourhood Response Teams. These teams ensure the following functions are addressed:

1. Team leadership
2. First aid
3. Utilities and fire suppression
4. Light urban search and rescue
5. Communications and transportation
6. Shelter and care-giving
7. Damage assessment.

Emergency Social Services

Emergency Social Services (ESS) are those services provided on a short-term basis (generally for 72 hours) to preserve the emotional and physical well being of evacuees and response workers in an emergency.

Under the Local Authority Emergency Management Regulation, communities must coordinate their own Emergency Social Services. PEP assists by providing ESS volunteers with training and consultation in developing their plans. During a disaster, PEP staff actively support local responders and ensure that the costs of providing essential services are paid promptly.

When people are forced to evacuate their homes temporarily, or their homes are destroyed, they may require assistance with essential services to maintain life and health. They will likely go to a Reception Centre for assistance. A Reception Centre is a safe place where people can gather to register, get information and receive assistance with their needs.

The services available at a Reception Centre may include:

- Referrals for food, clothing, lodging
- Family reunification
- Emotional support
- First Aid
- Health Services
- Communications
- Volunteer Services
- Public information
- Child care
- Transportation
- Pet care
- Recreational activities
- Other services as required.

Search and Rescue

Search and Rescue is the act of searching for, rescuing or recovering any person who becomes overdue, lost, injured, stranded or killed on ground or inland waters.

Almost every major city and municipality has a SAR Group located within its boundaries. Most of these SAR Groups are organized as registered volunteer societies and have varying degrees of association with the local municipality. SAR groups respond to incidents on request from the local police authority, BC Ambulance Service, or Department of National Defense.

Emergency Radio Communications

It is particularly important during the early stages of a major emergency or disaster that resource workers are able to quickly communicate with one another, to receive important information, to issue orders to action in the field and to communicate with a variety of agencies.

During a major disaster, existing police, fire, medical, hydro and other public safety communications links will experience large increases in the volume of message traffic plus long waiting periods to gain access to the communications network.

The local telephone system may not remain functioning because the system will be overloaded if it has not been rendered inoperable by the disaster. There is a vital need for alternate communications systems to meet the special demands which occur during a disaster.

Amateur radio operators are available in most communities in BC to provide communication links for response workers, or replace traditional communication methods during a disaster.

Private Sector, Business, Industry, Health and Schools

Involving Business and Industry in the Emergency Planning Process

In planning for disasters that may impact the community, the role of business and industry should be considered. The hazard analysis of the community would identify the possible hazards that businesses and industry may have within their organizations. As the general population is at risk from disasters the business community will also be impacted.

Both small and large businesses have benefited from having emergency response plans as well as business continuity and recovery plans. These plans describe what they would need to do during and following disasters such as earthquakes, floods, fires, etc. As computer information technology is commonplace in most businesses, the need for backup of computer information is critical for the economic survival of the business.

Ensuring the safety and survival of their staff is also critical. For this reason an awareness and preparedness program is recommended.

Representation on the local emergency planning committee should include individuals from the local business and industry community as well as utilities.

The Emergency Preparedness for Industry and Commerce Council (EPICC) assists the business community to promote preparedness. More information can be found at the EPICC website: <http://www.epicc.org>.

Involving Health in the Local Authority Emergency Plan

With the exceptions of services provided by physicians and the BC Ambulance Service, most of the health care services required during a disaster are provided within the Health Authorities Act. The Ministry of Health has a policy requiring Health Authorities to develop emergency plans which are consistent with those of the Ministry and other authorities; fulfill emergency response roles identified by government; and cooperate with other Health Authorities if required to share resources.

Involving Schools in the Local Authority Emergency Plan

Schools need to be included in emergency planning at the local authority level, as children will require direction and assistance during a disaster. A hazard analysis for the area in which the schools are located should be conducted. Schools in a flood prone area or near a railway line are at greater risk and specific plans to deal with the impact of these hazards need to be considered.

Representatives from the local school board(s) should be included on the local authority emergency planning committee, as the emergency plans developed by the schools need to be coordinated and integrated with the local authority emergency plan.

The school's emergency plan should consider the following:

- Before, during and after hour protocols for students when an emergency or disaster strikes
- Evacuation plans including moving students to a safe area
- Personal preparedness procedures for teachers and other staff in the schools. (Do they have a family plan so they can stay at the school during an emergency?)
- Emergency equipment such as food, water, first aid supplies stored within the school or outside in secure containers, and
- The provision for schools to act as reception centres if required.



Take a few moments now to answer the following questions:



1. What types of activities is PSEPC responsible for?



2. What is the mission of PEP?



3. What volunteer groups do PEP support and what type of support is provided?



4. What is the purpose of BCERMS?



5. Who should be included in your local emergency planning committee?



6. What should be included in your local emergency plan?

Section

4

Emergency Management Components

Upon completion of this section, you should be able to:

- √ Describe the six components of emergency management:
 1. Context
 2. Hazard, risk and vulnerability analysis
 3. Mitigation
 4. Preparedness
 5. Response
 6. Recovery

Introduction

Emergency management coordinates and strengthens your community's efforts to prepare for an emergency. It also helps local, provincial and federal authorities interact effectively in case of an emergency or disaster.

Good emergency management involves more than just adding to routine emergency plans. It goes beyond ensuring enough people, facilities, and supplies are available if needed. It is preparing to handle the unique problems that occur as a result of a disaster.

This section introduces the six components of emergency management.

The Six Components of Emergency Management

Emergency management has six components:

- Context
- Hazard, risk and vulnerability analysis
- Mitigation
- Preparedness
- Response
- Recovery.

Context

"Context" means the circumstances in which an event occurs. The context of an event affects the impact that it has on the community. For example, an earthquake will likely affect more people and cause more damage in a city than in a rural or wilderness area.

How a community is affected by a disaster depends on the hazards it faces, its geographical location, and how the community has developed. A successful emergency management team must know the community's strengths, weaknesses, resources, and capabilities. The team must understand the heart of the community - its people, the businesses and industries that sustain it, and the infrastructure that supports it.



Take a few moments now to think about your community or agency. List your ideas in the spaces provided.

- 1. What kind of community (or agency) do you live (or work) in? For example: size, demographics (age, socio-economic status, ethnic background, languages, disabilities) etc.



- 2. What businesses and industries support your community or agency? How critical are they and what would happen if they were lost because of a disaster?



3. What infrastructures are critical lifelines for your community or agency? Which elements of infrastructure are most vulnerable and what would be the impact of the partial or total loss of each or all of these elements of infrastructure?



4. Partnerships are an important part of successful emergency management. What public and private resources might be available to help your community or agency prevent, prepare for, or recover from a disaster? Where are they located, who controls them, and what are their capabilities?



Hazard, Risk and Vulnerability Analysis

The second component of emergency management requires that the community analyze:

- The hazards it faces
- The risk that an emergency or disaster will occur in the community, and
- The potential vulnerability or impact of such an event.

There are a number of definitions of hazard and risk. The following are the definitions most commonly used in emergency management.

A **hazard** is a source of potential harm or a situation with a potential for causing harm, in terms of human injury, damage to health, property, the environment, and other things of value, or some combination of these.

Risk, is the chance of injury or loss as defined as a measure of the probability (likelihood) and severity of an adverse effect to health, property, the environment, or other things of value.

Vulnerability are people, property, infrastructure, industry and resources, or environments that are particularly exposed to adverse impact from a hazard event. There are four groups of vulnerabilities to consider in your hazard scenarios: social, physical, economic and environmental.

Hazard Assessment: To assist your community in doing a hazard, risk and vulnerability analysis, an HRVA Toolkit is available on the PEP website at www.pep.bc.ca/hrva/toolkit.pdf

Based on your ideas about the industries in your area, your knowledge of weather patterns, and any other factors you deem pertinent, determine what hazards have the potential to affect your community.



On the following list, check those hazards that may affect your community or agency.

- Air crashes
- Avalanches
- Dam failures
- Diseases (human and animal)
- Earthquakes
- Forest fires
- Gas explosions and gas leaks
- Hailstorms
- Hazardous material accidents
- Heat waves
- Ice storms and ice fogs
- Interface Fires
- Landslides
- Lightning
- Local flooding
- Marine accidents
- Mine explosions
- Motor vehicle accidents
- Power outages
- Rail accidents
- Rain storms
- Riots
- Snow melt river flooding
- Snow storms
- Space object crash
- Structural collapse
- Technological failure (computer hardware and software)
- Terrorism
- Tsunami
- Urban Fires
- Volcanic activity

1. Are there any other hazards not identified in the previous list that may pose a threat in your area? List them, and consider why you think they may be hazards.



Risk Assessment: The overall process of risk analysis and risk evaluation.

2. Prioritize the hazards in your community or agency.



Vulnerability Assessment: Once an emergency management organization has analyzed the risk to the community of potential disasters, it must look at the impact of such events and the community's vulnerability.

Each hazard can affect the community in different ways, such as:

- Physical damage to the infrastructure, public and private buildings, and the environment
- Social impacts on individuals, families, children, community organizations and society as a whole
- Health issues, and
- Economic losses.

3. What is the likely impact of hazards on your community or agency?



The hazard, risk, and vulnerability analysis is the starting point for any emergency management program. Combined with the first component context, it forms the foundation of any emergency management activity. Like any good foundation it should be reviewed from time to time and, if necessary, rebuilt.

Mitigation

Mitigation consists of activities and practices designed to prevent or avoid a disaster, or to minimize the impact on the community. Improved practices can minimize future problems, save lives, and reduce injuries. Such practices can also save public and private money over the long term.

1. Provide examples of mitigation efforts that have been (or should be) taken in your community or agency.



Preparedness

Preparedness consists of activities designed to:

- Plan for effective response to and recovery from disasters
- Arrange for both internal and external resources to be available when needed
- Provide education and training for everyone with a role during a disaster, from first responders to members of the public, with the education and training needed to respond effectively
- Provide education and public awareness about emergency preparedness
- Train, exercise and evaluate emergency plans, and
- Revise plans and procedures.

1. What types of preparedness activities has your community or agency engaged in (i.e., public education, staff training, exercises, etc.)?



Response

Response consists of activities designed to address the short-term effects of a disaster. This includes agency response, resource coordination, organizational structure, protection / warning systems and communication.

- **Response Agencies:** A number of agencies may be involved in responding to a disaster. The most common first responders are law enforcement, fire and rescue, emergency medical services and public works personnel. Your emergency management organization must work closely with these agencies to determine the type of response required for each hazard identified and the capabilities and resources needed by responders.
- **Resource Coordination:** During a disaster, most communities and organizations will not have enough resources. A number of gaps in resources will be identified during the planning process. For example, there may be a need for more firefighting resources. Your organization should consider how extra resources could be accessed in case of a disaster. Private industry and other nearby municipalities may be able to provide resources. Resources based outside your community may not be immediately available after a disaster, so it may be necessary to plan interim measures.
- **Organizational Structure:** The organizational structure during a disaster is usually different from day-to-day community management. The British Columbia Emergency Response Management System (BCERMS) is

the structure used in this province in case of a disaster. How your organization will be structured during an emergency must be planned in advance. To prepare people to successfully fulfill their roles, the structure needs to be practised through training and exercises.

- **Protection / Warning Systems:** A protection / warning system may be needed in your community. Based on their hazard analyses, some communities in BC have already implemented protection / warning systems. Port Alberni has an audible warning system to notify the public of a tsunami threat. Other communities have telephone warning systems in case of a hazardous materials incident.
- **Communication:** Our society has become heavily dependent on technology for communications and computer systems. During a major emergency or disaster, there will be a large demand on such systems. Alternate systems should be available in case a disaster affects or shuts down day-to-day communication modes.

1. What response agencies exist in your community?



2. How would (or could) your community notify the public of an impending disaster?



3. What alternate means of communications are available in your community?



Recovery

Recovery from a disaster consists of a whole range of activities designed to restore community life and services to normal levels. Recovery also reduces the future vulnerability of the community and improves planning for future events.

Short-term recovery from a disaster returns vital life support systems to minimum operating standards. Long-term recovery may continue for years. Everyone in a community will be involved in recovery, including all levels of government, the business sector, families, and individuals. Ideally, disaster recovery processes will improve the community and make it a better, safer place for citizens.

1. Based on the hazards in your community, what may be some of the short-term recovery issues you could be faced with?



2. Based on the hazards in your community, what may be some of the long-term recovery issues you could be faced with?



Section

5

APPENDIX A — Steps in Declaring a State of Local
Emergency

APPENDIX B — Emergency References

APPENDIX C — Acronyms

APPENDIX D — Reference Source for Questions in
Section 2 and 3

APPENDIX A

Steps in Declaring a State of Local Emergency

Section 12 of the Emergency Program Act allows a local authority, or head of a local authority (Municipal Council or Mayor, or Regional District Board or Chair) to declare a State of Local Emergency if extraordinary powers are required to deal with the effects of an emergency or disaster. A local authority's Declaration is applicable ONLY to geographic areas within that local authority's jurisdiction. Steps to consider are:

1. The local authority must be satisfied that an emergency exists or is imminent.

Declaration can be made two ways:

- a) The Municipal Council or the Regional District Board passes a bylaw or resolution declaring a State of Local Emergency
or,
- b) The Mayor or Regional Chair may order the Declaration of a State of Local Emergency if there is no time to assemble the Municipal Council or Regional District Board.

Note: Before issuing a Declaration by order, the Mayor or Chair must use their best efforts to obtain the consent of the other members of Council and/or Board to the Declaration.

2. The local authority drafts the Declaration of a State of Local Emergency. The Declaration of State of Local Emergency must identify the nature of the emergency, the area where it exists or is imminent, and the powers necessary to prevent or alleviate the effect of the emergency.
3. The local authority sends a draft of the Declaration and accompanying maps to the Provincial Regional Emergency Operations Centre (PREOC) to ensure that the Declaration is complete and valid in all respects.
4. The signed Declaration and delegation order must be submitted to the Provincial Regional Emergency Operations Centre (PREOC) that will ensure that the Solicitor General is informed. Then the Mayor or

Regional Chair must immediately publish notice of the Declaration using any method that ensures that affected residents are made aware of the Declaration in a timely manner.

Extension

When necessary, the Mayor or Regional Chair will seek the authority of the Solicitor General to extend the term of the Declaration beyond seven days. A request is submitted to the Provincial Regional Emergency Operations Centre (PREOC) at least three days prior to the expiration of the declaration. The Solicitor General will issue an Extension Approval as appropriate. Successive extensions of seven days each may be requested. The local authority may choose to issue an amended Declaration or send out a public notice indicating an extension has been granted.

Cancellation

The mayor or regional chair must cancel the declaration as soon as the extraordinary powers are no longer needed. Notification of cancellation of the declaration must be submitted to the Provincial Regional Emergency Operations Centre (PREOC) that will ensure that the Solicitor General is informed. The cancellation notice must then be published, ensuring that the affected population is notified in a timely manner.

APPENDIX B

Emergency References

Websites

Emergency Preparedness Information Exchange	http://www.epix.hazard.net
Public Safety and Emergency Preparedness Canada	http://www.psepc.gc.ca
Provincial Emergency Program	http://www.pep.bc.ca
ESS Program Office	http://www.ess.bc.ca
Justice Institute of BC	http://www.jibc.bc.ca
Canadian Red Cross Society	http://www.redcross.ca
American Red Cross	http://www.redcross.ca
Salvation Army	http://www.sallyann.org/eds
St. John Ambulance	http://www.sja.ca
Federal Emergency Management Agency (USA)	http://www.fema.gov

Associations

Canadian Emergency Preparedness Association	http://www.cepa-acpc.ca
International Association of Emergency Managers	http://www.iaem.com
Emergency Social Services Association	http://www.essa.bc.ca
Emergency Preparedness for Industry and Commerce Council	http://www.epicc.org

Recommended Reading (all available at the Justice Institute of BC library)**HV/551.5/C26/P427/1997**

British Columbia: hazard, risk and vulnerability analysis: volume 1 / Laurie Pearce.

HV 551.3 E44 1991

Emergency management: principles and practice for local authority / editors, Thomas E. Drabek, Gerard J. Hoetmer.

HV 555 U6 A94 1989

Disaster response: principles of preparation and coordination / Erik Auf der Heide.

HV 551.5 C2 L653 2000

Disaster Canada/ Janet Looker.

HV 551.5 C2 I543 2000

In the face of disaster: true stories of Canadian heroes from the archives of MacLean's / edited by Michael Benedict.

HV 551.2 C254 1996

The Canadian fire officer's guide to emergency management / edited by Ron Kuban.

HV 551.3 M55 1999

Disasters by design: a reassessment of natural hazards in the United States / Dennis S. Mileti.

Emergency Planning Journals

- 911 Magazine (New issues displayed in Emergency Medicine Section)
- Agency Insight (Alta. Public Safety Services)
- APCO Bulletin
- Australian Journal of Emergency Management
- Canadian Centre for Emergency Preparedness News (CCEP)
- Canadian Journal of Emergency Management
- Civil Protection
- Contingency Planning & Management For Business Preparedness and Recovery
- CUSEC Journal

- Disaster Recovery Journal
- Disasters Preparedness and Mitigation in the Americas
- Earthquake Spectra
- EERI Newsletter
- Emergency Planning Digest
- Emergency Preparedness Digest
- Epi Center News
- EPICC Gram: Emergency Preparedness for Industry and Commerce Council
- IAEM Bulletin (Int'l Assoc. of Emergency Managers)
- Information Bulletin (Provincial Emergency Program)
- International Journal of Mass Emergencies and Disasters
- Journal of Contingencies and Crisis Management
- Journal of the World Assoc. for Emergency and Disaster Medicine
- Macedon Digest
- Messages
- MIAC News (Major Industrial Accidents Council)
- Natural Hazards Informer
- Natural Hazards Observer
- Natural Hazards Review
- NCEM Bulletin (National Coordinating Council on Emergency Management)
- NCEER Bulletin (National Center for Earthquake Engineering Research)
- PEP Talk
- Phenomenal News
- Prehospital and Disaster Medicine (New issues displayed in Emergency Medicine section)
- Refugees
- Spill Technology Newsletter
- Technical Rescue
- Tsunami Newsletter
- Wavelength (New issues displayed in Emergency Medicine section)

APPENDIX C

Acronyms

ADRA	Adventist Development and Relief Agency
BCERMS	British Columbia Emergency Response Management System
CBRN	Chemical, Biological, Radiological, Nuclear
CCG	Central Coordination Group
CCRU	Community Crisis Response Units
CDCC	Canadian Disaster Child Care
CEPR	Community Emergency Program Review
CF	Canadian Forces
CRCS	Canadian Red Cross Society
CRIB	Central Registry and Inquiry Bureau
DFA	Disaster Financial Assistance
DND	Department of National Defense
DOC	Department Operations Centre
ECC	Emergency Coordination Centre
EHS	Emergency Health Services
EMBC	Emergency Management British Columbia
EOC	Emergency Operations Centre
EPC	Emergency Program Coordinator
EPICC	Emergency Preparedness for Industry and Commerce Council
ESB	ESS Staffing Bureau
ESS	Emergency Social Services
ESSA	Emergency Social Services Association
ESSD	Emergency Social Services Director
FEMA	Federal Emergency Management Agency (United States)
FR	Family Reunification
HC	Health Canada

Acronyms continued...

HRVA	Hazard, Risk and Vulnerability Analysis
ICS	Incident Command System
IEPC	Interagency Emergency Preparedness Council
JEPP	Joint Emergency Preparedness Program
JIBC	Justice Institute of BC
MCFD	Ministry of Children and Family Development
MDS	Mennonite Disaster Service
MOC	Ministry Operations Centre
MROC	Ministry Regional Operations Centre
MST	Mobile Support Team
MZOC	Ministry Zone Operations Centre (Forests)
NESS	National Emergency Stockpile System
NGO	Non-Governmental Organization
OC	Operations Centre
PAD	Priority Access Dialing (Emergency Phone Line Priority System)
PDA	Personal Disaster Assistance
PECC	Provincial Emergency Coordination Centre
PEP	Provincial Emergency Program
PERCS	Provincial Emergency Radio Communications Service
PESSOC	Provincial Emergency Social Services Operations Centre
PIO	Public Information Officer
PREOC	Provincial Regional Emergency Operations Centre
PSEPC	Public Safety and Emergency Preparedness Canada
PECC	Provincial Emergency Coordination Centre
PSSG	Ministry of Public Safety and Solicitor General
RC	Reception Centre
R & I	Registration and Inquiry
RCMP	Royal Canadian Mounted Police
RDD	Radiation Dispersal Device


Acronyms continued...

RUS	Referrals Unit Supervisor (ESS)
SAR	Search and Rescue
SARS	Severe Acute Respiratory Syndrome
SG	Solicitor General
SJA	St. John Ambulance
SOP	Standard Operating Procedures
TEAMS	Temporary Emergency Assignment Management System
TPARC	Telephone Pioneers Amateur Radio Club
TSA	The Salvation Army
WCB	Workers Compensation Board

APPENDIX D

Reference Source for Questions in Sections 2 and 3

Section 2

- Question #1: See page 2.1 for the answer
- Question #2: See page 2.2 for the answer
- Question #3: See page 2.6 for the answer
- Question #4: See page 2.6 - 2.7 for the answer

Section 3

- Question #1: See page 3.2 for the answer
- Question #2: See page 3.3 for the answer
- Question #3: See page 3.4-3.5 for the answer
- Question #4: See page 3.9 for the answer
- Question #5: See page 3.12 - 3.13 for the answer
- Question #6: See page 3.14 for the answer

Section 1 and Section 4:

These questions pertain to your own community or agency; therefore, there is no one correct answer.

