



Province of British Columbia

# B.C. Earthquake Immediate Response Plan

Version 1  
July 20, 2015

## A Message From the Minister of Justice



Over just the last few years, we have been warned a number of times: large earthquakes off Haida Gwaii in 2012 and 2013, and an Auditor General's report in 2014. For British Columbia, the Big One is not a matter of if, but when, and we must do more to be ready.

With the B.C. Earthquake Immediate Response Plan (IRP), we take another step forward. Our government is aware and fully supportive of the framework it lays out.

In the past, we have focused our efforts on infrastructure investments and notification system upgrades. Over the last 15 years, we've invested \$17 billion in seismic upgrades for schools, hospitals, roads and bridges. In just the last year, we've also improved our alerting system technology, improving tsunami notification time by over 50%.

This is significant progress and, while this kind of work will continue, we must also acknowledge it could be all for naught if we don't have the right partnerships in place or if we haven't identified gaps in our response that may exist today.

This is the goal of the IRP. Emergency Management BC (EMBC) has identified two major, disastrous earthquake scenarios and the worst-case assumptions that we must prepare for to be fully ready.

The B.C. IRP lays out the roles of the Province, of cabinet ministers, of local authorities and First Nations, of the federal government, of intergovernmental and non-governmental organizations, utilities, and of our partners in the private sector. We all have a part to play, and we recognize that the success of the provincial response will rely heavily on the preparedness and familiarity that our government and all of our partners have with these roles.

As the Minister of Justice and the Minister responsible for Emergency Management BC, I can assure British Columbians and our emergency management partners that not only does our government endorse this plan, but also we are fully committed to exercising it and refining it to identify and close gaps in our operational preparedness.

As we do this, guided by the B.C. IRP, our province and our citizens will be better able to prepare for, respond to and recover from a major earthquake.

Hon. Suzanne Anton  
Attorney General and Minister of Justice  
Minister responsible for Emergency Management BC

## Foreword



This B.C. Earthquake Immediate Response Plan (IRP) marks a milestone in catastrophic earthquake preparedness in British Columbia. In developing this plan, Emergency Management BC (EMBC) has set the provincial framework for the interagency cooperation that will be necessary for an effective response to what will be a challenging situation for all affected jurisdictions. We are indebted to our partner organizations, including local authorities, that have contributed to planning thus far.

This plan is only the beginning; in order for it to be viable, EMBC plans to continually test its assumptions, and exercise and refine the framework it describes. Further significant work underway or planned for the future includes sustained response and recovery planning that will be the main effort for our catastrophic preparedness over the coming years. This additional work will augment the IRP and develop a longer-term view to British Columbia's ability to overcome a catastrophic earthquake.

Most important is that B.C. is on the path towards true and practical catastrophic preparedness at the provincial level. EMBC is committed to leading this undertaking and we value existing and emerging partnerships to achieve unity of effort and build resilience in B.C. as we prepare for a worst-case event. In doing so, we will only be stronger in our ability to overcome lesser challenges.

Pat Quealey  
Assistant Deputy Minister  
Emergency Management BC

## Acknowledgements

The collaborative efforts of the BC Earthquake Planning Team were critical in the development of this plan. EMBC would like to thank this team and acknowledge key partners, including the British Columbia ministries of Health and Transportation and Infrastructure, the Canadian Red Cross, the Department of National Defence, Natural Resources Canada and Public Safety Canada. We have also looked to international partners for best practices and thank the US Department of Homeland Security, Federal Emergency Management Agency (FEMA) Region IX, the California Governor's Office of Emergency Services and the New Zealand government for consenting to the adaption of some elements of their earthquake response plans.

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## **Executive Summary**

Emergency Management BC (EMBC) is responsible for leading the management of provincial level emergencies and disasters and supporting other authorities within their areas of jurisdiction. As such, EMBC has made a commitment to British Columbians to develop a comprehensive provincial earthquake plan. The BC Earthquake Immediate Response Plan (IRP) is the first component of this comprehensive plan and sets the conditions for the subsequent planning efforts: sustained response and recovery.

The IRP details how the Province will lead and coordinate during the immediate response phase and articulates the roles, responsibilities and integration of the provincial government, its agencies, and partners. It is intended to be utilized by EMBC, provincial ministries and crown corporations, and also integrates Federal government, local authorities and First Nations, critical infrastructure owners, bordering jurisdictions, and intergovernmental organizations (IGOs) and non-governmental organizations (NGOs) involved in the provincial-level response. Although the IRP has been developed for a catastrophic earthquake, it is designed to be flexible and scalable; therefore, it may also be used for other emergency events that have a significant impact to B.C.

The IRP has been structured into the following sections to address immediate response actions and enabling activities for subsequent phases: Phases of Response and Recovery; Scenarios and Impacts; Leadership and Integration; Response Actions; Logistics; Situational Understanding; Critical Infrastructure; Emergency Social Services and Mass Care; Volunteer Coordination; and Strategic Communications. In addition, several annexes provide further detail on areas such as the earthquake hazard, Provincial Declaration of Emergency, requests for assistance, telecommunication procedures, critical resources, strategic and public messages, and critical information requirements.

### ***Phases of Response and Recovery***

The Province recognizes three phases for planning efforts and operational purposes that are progressive and overlapping: Immediate Response, Sustained Response and Recovery. Within each phase, key objectives, activities, decisions and transition conditions are described. As the lead agency, EMBC will coordinate immediate and sustained response operations. A Recovery Task Force, identified by Cabinet, will be established and integrated with response operations, and will lead and coordinate recovery operations concurrent to response operations. As the transition happens from sustained response to recovery, the Recovery Task Force will assume leadership for overall provincial coordination.

### ***Scenario and Impacts***

For planning purposes, the worst-case seismic scenario for B.C. is addressed here in the IRP: a major, shallow earthquake near the urban centres of either Greater Vancouver or Greater Victoria. These two locations were chosen due to population density, the location of the seat of government, economic significance, and critical infrastructure interdependencies. Worst-case scenarios were used to create a complex emergency situation affecting multiple jurisdictions and requiring provincial coordination, national and international support. In addition, flexible and scalable planning solutions to address these scenarios enables the Province to apply elements of this plan to events of equal or lesser consequence.

### ***Leadership and Integration***

The British Columbia Emergency Management System (BCEMS) will guide the response with the provincial emergency management structure fully activated with integration from decision makers, all levels of government, critical infrastructure owners, NGOs, and the private sector. Due to the complexity of the event requiring extensive cross-agency integration and coordination over an extended period of time, a Provincial Earthquake Response and Recovery Centre (PERRC) may be established to provide overall and enhanced provincial coordination, support to local authorities and First Nations, coordinate overall earthquake response actions, and set the conditions for recovery with the co-location and integration of a Recovery Task Force.

### ***Response Actions***

A Provincial State of Emergency will be declared with the entire province supporting response efforts to the impact area. Provincial ministries will activate Ministry Operations Centres (MOCs), assess ministry mission critical services and activate business continuity plans. Crown corporations, agencies, critical infrastructure owners and operators, and federal government partners will support provincial operations at the appropriate level. Local authorities will activate emergency plans and maintain control and direction of the response within their jurisdictional boundaries. All response partners will activate emergency plans, conduct impact analysis and integrate with provincial operations to facilitate provincial coordination, support local authorities, and set the conditions for sustained response and recovery.

### ***Logistics***

During immediate and sustained response, a provincial, multi-organizational provincial Logistics Management System will be established to procure, manage and transport response personnel, equipment and supplies. This system includes several pre-identified staging areas that will be established across the province. The Province has identified and prioritized transportation routes, multimodal transportation features and movement to facilitate the flow of resources into the impact area to support local governments.

### ***Situational Understanding***

Situational reporting, combined with impact analysis from all levels of government, stakeholders and response partners, will contribute to building a common operating picture. Reporting structures for a catastrophic earthquake will utilize the existing BCEMS mechanisms and are enhanced through critical information requirements and impact assessments. These will enable authorities to rapidly process, collate and analyze information to enable rapid decision-making, such as prioritization of capabilities and critical resources.

### ***Critical Infrastructure***

In coordination with critical infrastructure (CI) owners, the Province will coordinate priority mitigation and restoration efforts to support critical assets and services. Restoration of CI that supports life-saving and life-sustaining activities will initially have priority effort. As time permits and resources are made available, restoration of non-critical services and facilities within each CI sector will be addressed. These CI restoration activities will be prioritized during the sustained response and recovery phases.



### ***Emergency Social Services, Mass Care and Volunteer Coordination***

Emergency social services, mass care and volunteers will require effective coordination of NGOs and other organizations to ensure adequate provision of resources to people in need. This coordination of humanitarian assistance will require national and international surge capacity and expertise to assist with displaced persons and associated basic medical, sheltering, food and sanitation requirements. Critical resources and capabilities have been identified with assistance agreements in place to augment requirements, including those with the Province of Alberta and the Government of Canada.

### ***Strategic Communication***

The Province will make every effort to ensure stakeholders and the public receive timely and critical information by coordinating communications among partners. Large-scale media relations, public information and strategic communications will be coordinated through a Joint Information Centre (JIC) co-located with provincial operations.

### ***Conclusion***

This plan lays the foundation for addressing a shared hazard and responsibility through coordinated and integrated effort and sets the conditions for sustained response and recovery. With the goal of continuous improvement, this plan encourages discussion and innovation and will be exercised and further refined from lessons learned and stakeholder engagement.

## Section 1: Introduction

The IRP describes the scenarios and anticipated impacts of a catastrophic earthquake and the leadership, coordination, communication, logistics and integration required to respond effectively to save lives and set the conditions for sustained response and recovery.

EMBC recognizes three phases for earthquake planning and operations that are progressive and overlapping: Immediate Response, Sustained Response and Recovery. This plan focuses on the immediate response phase and lays the foundation for further planning in sustained response and recovery. The immediate response phase comprises activities occurring from the onset of the earthquake to a stabilized and integrated sustained response. Transition from the immediate response phase to the sustained response phase is based on conditions met, rather than time.

For planning purposes, two different scenarios were developed to present the worst-case earthquake events facing B.C.: a major, shallow earthquake near the urban centres of either Greater Vancouver or Greater Victoria. These two locations were chosen due to population density, the location of government, economic significance, and critical infrastructure interdependencies. Worst-case scenarios were used to create a complex emergency situation affecting multiple jurisdictions and requiring provincial coordination and national and international support.

The Cascadia Subduction Zone scenario was not chosen due to lower population and infrastructure impacts; however, acknowledging this event would also be catastrophic, this plan was designed to be flexible and scalable and can be utilized for this or any other significant event. For information on the earthquake hazard to B.C., please see [Annex A: Earthquake Hazard in B.C.](#)

### Purpose

The intent of this document is to outline how the Province will coordinate response efforts between provincial ministries and how other levels of government, critical infrastructure owners and NGOs will integrate with the provincial emergency management structure and response operations.

The purpose of the IRP is to:

- Define the framework for the decision-making and coordination in the immediate response to a catastrophic earthquake
- Support the needs of the impact area:
  - saving lives and sustaining human life
  - minimizing suffering
  - stabilizing critical infrastructure
- Set the conditions for sustained response and recovery

### Scope

The IRP addresses a major, shallow earthquake impacting the major urban centres of either Greater Vancouver or Greater Victoria and:

- Outlines the provincial response to a catastrophic earthquake
- Describes the roles and responsibilities of provincial ministries and agencies, local authorities, federal agencies, IGOs and NGOs, volunteers and the private sector
- Outlines collaborative intergovernmental relationships and integration between local, provincial, federal and U.S. partners

This plan is an annex to the BC Comprehensive Emergency Management Plan.

### **Plan Administration**

The IRP will be reviewed and updated by EMBC every five years, following lessons learned, or as required.

### **Audience**

This IRP is intended to be utilized by:

- EMBC
- Provincial ministries and crown corporations

The IRP also recognizes the requirement to interface operationally and outlines areas of integration with the following partners:

- Federal departments and agencies
- Local governments
- CI owners and operators
- IGOs and NGOs involved in the provincial-level response
- Bordering jurisdictions

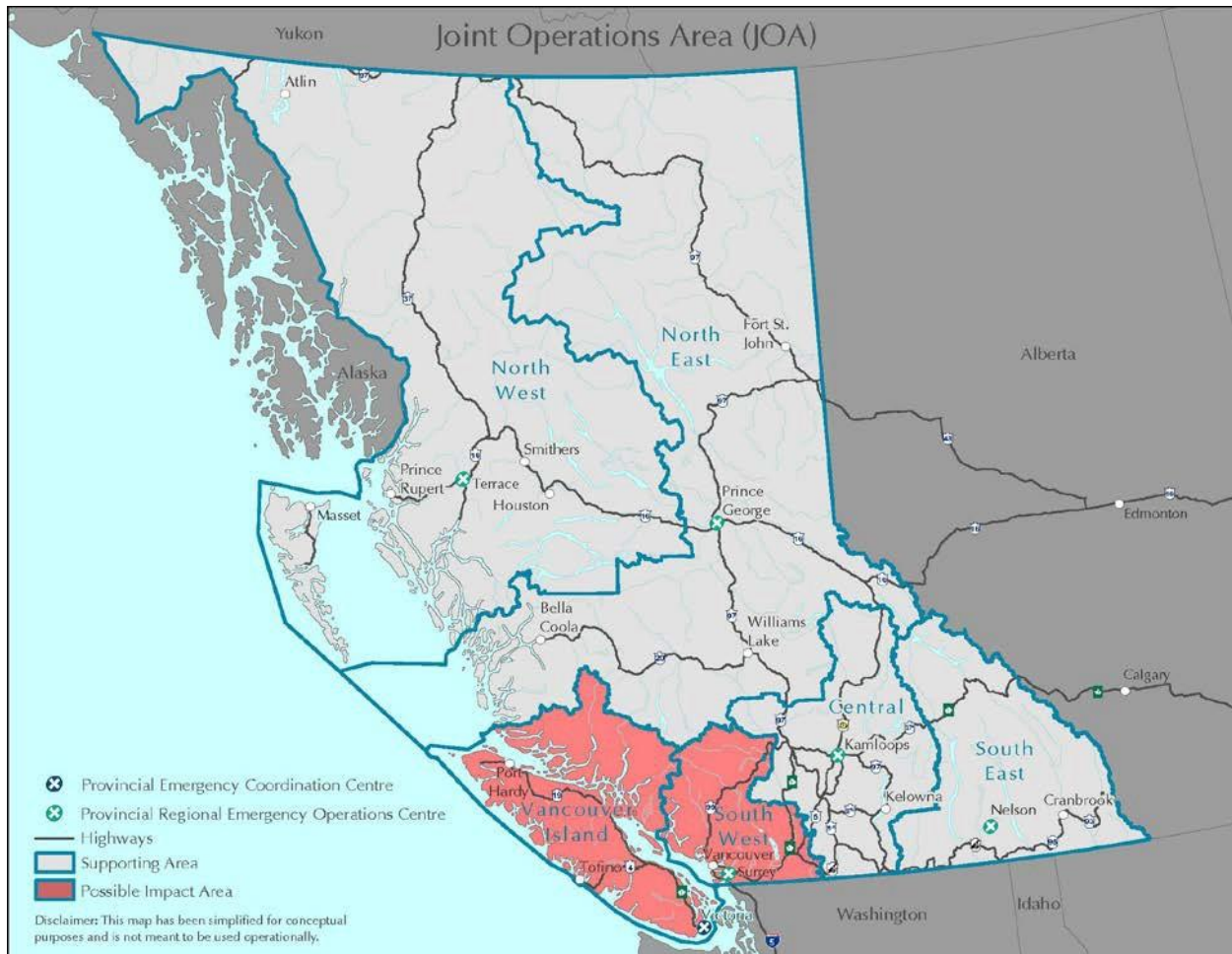
### **Joint Operations Area**

All levels of government, emergency management, CI owners and non-governmental partners across the province will be required to synchronize efforts to support the response to the areas impacted by the earthquake. This plan recognizes the entire province as part of the response operation, and as such, is considered the Joint Operations Area (JOA). The JOA is delineated as follows:

1. Impact area - the area impacted by a catastrophic seismic event and requiring coordinated, emergency support. For the purpose of this plan, this includes the Vancouver Island Region and/or the Southwest Region.
2. Supporting area – the areas of the province that will provide emergency support to the impact area. This includes all areas external to the possible impact areas and within provincial boundaries and delineated by EMBC operational boundaries: Northwest, Northeast, Central and Southeast regions. The Southwest Region or Vancouver Island Region will also be supporting if not impacted.

The following map illustrates the JOA and includes EMBC’s six provincial emergency management boundaries.

Figure 1 - Joint Operations Area Map



## Authorities

Authority for the Province to plan for earthquakes resides within the *Emergency Program Act (EPA)*. The Act and regulations established under the authority of the EPA also specify the roles of British Columbia government ministries, as well as the responsibilities of local authorities in B.C. for overall emergency preparedness, response, and recovery.

In the event of a catastrophic earthquake, a declaration of a state of emergency will be made under section 9(1) of the EPA, and for the duration of the state of emergency the Minister of Justice may implement acts and procedures the Minister considers necessary to prevent, respond to or alleviate the effects of an emergency or a disaster (See [Annex B: Provincial Declaration State of Emergency](#) , [Appendix B-1 Provincial Declaration Matrix](#) and [Appendix B- 2 Provincial Declaration State of Emergency Template](#)). The emergency powers within the EPA will be used to support local government response and recovery efforts, support States of Local Emergency within the impact area and to facilitate the coordination of resources, execution of critical actions, and sourcing assistance from other areas of B.C.

## **Responsibilities**

This document aims to integrate and coordinate the immediate response actions of stakeholders; however, the IRP relies on stakeholders developing their own plans and procedures for a catastrophic earthquake. Provincial ministries, local governments and supporting agencies are responsible for immediately activating their emergency and business continuity plans without waiting for direction from EMBC. EMBC will coordinate provincial response operations based on the objectives and procedures outlined in this plan.

## **Relationship and Interdependencies with Other Plans, Agreements and Organizations**

### **Plans**

The IRP is a component of the Comprehensive Emergency Management Plan (CEMP) and will guide provincial and support agency response. Concurrent plan activations by responding and supporting partners include:

#### ***Local Authority***

Both the EPA and the Local Authority Emergency Management Regulation established the responsibility of local authorities to develop emergency plans. Local authority plans guide their local response and the IRP guides the provincial response. During a provincial State of Emergency, it is anticipated local authorities will continue to follow their plans with the provincial declaration working to support the efforts of the local authority by properly sourcing, prioritizing and providing resources from the supporting area to the impact area.

#### ***Alberta Earthquake Response Plan for a Catastrophic Earthquake British Columbia***

The *Alberta Emergency Response Plan for a Catastrophic Earthquake in B.C.* outlines how Alberta will coordinate assistance to support B.C. in response to a catastrophic earthquake. The plan outlines activities that work in coordination with the federal government's *Earthquake Response Protocol* and B.C.'s IRP. <http://www.aema.alberta.ca>

#### ***Federal Plans***

The Government of Canada (GC) *Earthquake Response Protocol* provides strategic guidance for the coordination of the GC in response to a significant earthquake in Canada. The protocol complements the *Federal Emergency Response Plan* and its associated Emergency Support Functions, and the National Emergency Response System, which are intended to support provincial emergency response activities. Public Safety Canada is the primary department coordinating the GC response through the Government Operations Centre. Other federal plans that may be activated are the GC Plan for the Movement of People and Goods During and Following an Emergency and internal department and agency emergency response plans. <http://www.publicsafety.gc.ca>.

#### ***Department of National Defence – Contingency Plan PANORAMA***

Following a catastrophic earthquake event affecting southern Vancouver Island and/or the Greater Vancouver area, Joint Task Force Pacific (JTFP) will assess the situation and, if required,

activate the Canadian Armed Forces (CAF) regional Contingency Plan (CONPLAN) PANORAMA – which is the CAF regional response to a catastrophic earthquake effecting B.C. Engagement with civil authorities will occur early and at multiple levels to determine how and where military forces will be best engaged in immediate response activities in support of the Province.

CONPLAN PANORAMA is linked to and integrated with other CAF regional and higher level plans. Combined, these plans detail actions of the CAF units, bases and formations in B.C., and the reinforcement of JTFP with other high readiness CAF elements throughout Canada. Reinforcement will occur through a combination of pre-planned deployments and through the Request for Assistance (RFA) process ([Annex C: Request for Federal Assistance](#)).

#### ***BC Tsunami Notification Process Plan***

In the event a tsunami is generated, such as from a North American plate earthquake, Cascadia Subduction Zone earthquake or a far field seismic event, the BC Tsunami Notification Process Plan will be activated by EMBC to disseminate tsunami notifications for the province through the Provincial Emergency Notification System (PENS).

#### **Agreements**

There are a number of agreements in place between B.C. and other entities. Individual ministries may have emergency response agreements for specific hazards and/or resources within other jurisdictions. The following agreements are primary to the BC Earthquake Immediate Response Plan.

#### ***Regional***

##### **Metro Vancouver Regional Advisory Group**

The 23 local authorities comprising Metro Vancouver and EMBC established the *Metro Vancouver Regional Advisory Group* to support the Southwest Provincial Regional Emergency Operations Centre (SWE PEOC) with high-level consultation and decision-making during emergency events of regional significance within Metro Vancouver jurisdictions. The purpose of the Metro Vancouver Regional Advisory Group is to share situational information; confirm regional priorities; collaborate on regional decisions; and coordinate sharing and allocation of resources across Metro Vancouver.

The Metro Vancouver Regional Advisory Group is intended to address regional issues where additional high-level input or recommendations are required that cannot be obtained through normal EOC to PEOC processes or through existing policies and guidelines.

##### **Pacific Northwest Emergency Management Arrangement (PNEMA)**

PNEMA is an inter-jurisdiction agreement between Alaska, Idaho, Oregon, Washington, the Yukon and British Columbia for cooperating during emergency events, including the provision of emergency management assistance requested by the impacted member jurisdiction. In a catastrophic event, B.C. would verify the need for assistance and contact PNEMA's International Coordination Group (ICG). The ICG exercises overall coordination and control of all activations of

the PNEMA system and, therefore, would coordinate among PNEMA leadership and B.C. and compile resource lists offered by member signatories. The ICG will also determine the need to deploy a PNEMA resource management team (known as an A-Team) to B.C. to coordinate requests for assistance from PNEMA signatories and to deploy and manage PNEMA resources in support of B.C. earthquake response efforts.

#### ***Inter-provincial/territorial Assistance***

In 2010, a Memorandum of Understanding (MOU) for Inter-jurisdictional Emergency Management Assistance was finalized between the members of the Canadian Council of Emergency Management Organizations (CCEMO). The MOU establishes protocols for requests for mutual assistance between the provinces and territories and mutual cooperation and collaboration in emergency management activities. The MOU allows B.C. to request mutual aid from one or more signatories and outlines protocols for the mutual aid request.

In addition, a MOU has been established between B.C. and Alberta for interprovincial emergency management assistance. This MOU will expedite the movement of people and resources between the two provinces in the event of a disaster.

#### ***First Nations***

The Federal Government, through Aboriginal Affairs and Northern Development Canada (AANDC), holds the legislated responsibility for emergency management activities on First Nations reserve lands. Through a Letter of Understanding with AANDC, EMBC will provide support in emergency response and recovery to First Nations reserve communities when requested by either AANDC or the local Band Council.

#### ***Canadian Red Cross***

A MOU between the Government of British Columbia and the Canadian Red Cross regarding the development of an official Auxiliary to Government role provides a framework for collaboration in the delivery of public humanitarian programs and services.

A Letter of Agreement (LOA) between the Government of British Columbia and the Canadian Red Cross allows for the timely and effective deployment of out-of-province Emergency Response Units (ERUs) and Field Assessment Coordination Teams (FACTs) as a temporary resource into B.C. in times of major disaster and could be activated immediately following a catastrophic earthquake.

#### ***International Assistance***

There are several international organizations that provide response capabilities and assistance following natural and humanitarian disasters. The Government of B.C. may require expertise in the coordination of humanitarian assistance provided by these organizations, such as the United Nations Office for the Coordination of Humanitarian Assistance (UN OCHA). Requests for

international assistance will be coordinated by the Government of Canada through the Department of Foreign Affairs, Trade and Development.

## Plan Activation

The IRP will be activated following a catastrophic earthquake with significant impacts to B.C. The scope and scale of the impacts of a disaster will be such that a provincial State of Emergency will be declared as soon as possible and activation of this plan will occur in one of the following ways:

- **By decision:** As per Section 7 of the EPA, the IRP will be activated by the Minister of Justice or by the following:
  - EMBC Assistant Deputy Minister
  - EMBC Executive Director, Operations and Recovery Transition, or
  - Other EMBC Executive Directors or senior decision-makers available within EMBC.EMBC and stakeholders will be notified of the plan's activation through the PENS or by any available means.
  
- **By default:** Following a catastrophic earthquake, agencies are to follow the Agency Communication and Telecommunication Procedures as described in [Annex E](#). Initially, agencies are to attempt to make contact with their own offices in the impact areas; if this is impossible or communications in the impact areas are degraded, agencies are to assume activation of this plan. Once the provincial emergency management structure is operational, EMBC will confirm the plan's activation through the PENS.

## Assumptions/Key Facts

The following assumptions and facts have been assessed in the development of this plan:

- a. **State of Emergency:** The Province of British Columbia will declare a provincial State of Emergency within the first hours following the earthquake. The impact of the earthquake will be of a magnitude that local governments within the impact area will be overwhelmed and require coordination and support from the Province; the Province will require a State of Emergency to enact the extraordinary powers provided through a declaration.
- b. **Provincial Emergency Management Structure is functional:** The Provincial Emergency Coordination Centre (PECC), Provincial Regional Emergency Operations Centres (PREOCs) and local government Emergency Operations Centres (EOCs) will be functioning and coordinating in either their primary locations or alternate locations.
- c. **Responding agencies are functional:** Responding agencies will be activated, either in their primary locations or alternate locations. Agencies within the impact area will have a reduction in capability or capacity, while it is expected that supporting areas will be largely unaffected and functional.
- d. **Communications are functional:** All responding agencies will be able to communicate, though there will be degradation in primary methods or systems and enhanced use of communications via satellite phone, amateur radio or other means.



- e. **Major transportation routes and nodes will be impacted:** Road, rail, air and marine transportation will be disrupted.
- f. **Provincial Staging Areas are able to activate:** Provincial Staging Areas are located outside the impact area and used to organize, prioritize and disseminate disaster resources.
- g. **Areas will be isolated:** Large parts of the impact and surrounding area will be inaccessible by road due to earthquake-induced landslides, liquefaction and other secondary impacts and will be further isolated due to damage to airports and marine ports.
- h. **Spontaneous mass evacuation will not take place:** Should evacuations be required, they will be coordinated after situational understanding and when necessary for the preservation of life and safety. Critical casualties, essential response personnel and stranded travellers will be re-located as part of the immediate response.
- i. **Emergency Social Services and Mass Care:** A significant portion of the population will require emergency social services, with an estimated 92,000 displaced persons in Metro Vancouver and an estimated 14,000 in the Capital Regional District requiring emergency shelter<sup>1</sup>. Local governments will establish reception centres and group lodging. Support agencies with local capacity will begin providing immediate relief to those impacted.
- j. **Communities are responsive and self-activating:** Communities will work together without receiving guidance from the Province. This includes neighbour helping neighbour, individuals volunteering within communities and communities assisting other communities in need.

## Financial Assistance

Under the EPA and *Compensation and Disaster Financial Assistance (DFA) Regulation*, local authorities can receive financial assistance for eligible emergency response costs incurred during a disaster and assistance for some post-disaster recovery costs expended to repair or restore public works and facilities essential to operations. In the event of a catastrophic earthquake, standard protocol will be followed; however, additional funding mechanisms may be required given the likelihood of extensive damage.

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<sup>1</sup> Numbers are from Statistics Canada's 2011 Census based on four per cent of the population as per Section 2: Anticipated Impacts - Housing. Loss estimates were created by Natural Resources Canada using HAZUS loss estimation software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modelled results and the actual losses following a specific seismic event.

## Section 2: Phases of Response and Recovery

The Province recognizes three phases for planning efforts and operational purposes that are progressive and overlapping: Immediate Response, Sustained Response and Recovery. EMBC is the lead agency and will coordinate immediate and sustained response operations. The Recovery Task Force (described below) will be integrated with response operations and will lead and coordinate recovery operations concurrent to response operations. With transition to from sustained response to recovery, the Recovery Task Force will assume leadership for overall provincial coordination (See Figure 2: Response and Recovery Progression on p. 21).

### Immediate Response Phase

The Immediate Response Phase comprises activities occurring from the onset of the earthquake and focuses on lifesaving, integration of leadership and coordination, logistics, and setting the conditions for a sustained, coordinated response and recovery effort.

#### Objectives

Objectives in the immediate response phase include:

- Saving lives
- Reducing immediate threats to life
- Public health and safety
- Providing emergency social services and mass care
- Restoration of critical facilities, communication, utilities and transportation infrastructure
- Situational understanding
- Public information
- Setting the conditions for sustained response and recovery

#### Key Activities

Key activities and decisions are listed in the table below to achieve Immediate Response Phase objectives. 'All' represents first responders, all levels of government, CI, and IGO/NGO.

| Activities and Decisions                                                                             | Responsible Authority                                    |
|------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| • Activate emergency plans                                                                           | • All                                                    |
| • Business continuity requirements                                                                   | • All                                                    |
| • Cabinet formed and Ministers-Deputies Emergency Committee (M-DEC) activated                        | • Office of the Premier                                  |
| • Initiate response actions                                                                          | • All                                                    |
| • Provide situational understanding, including impact assessment of capabilities and resources       | • All                                                    |
| • Activate strategic communications plan                                                             | • Government Communications and Public Engagement (GCPE) |
| • Declaration of Provincial State of Emergency                                                       | • Minister of Justice                                    |
| • Prioritizing critical resources                                                                    | • CCG, M-DEC confirmation                                |
| • Activation of Requests for Assistance: <ul style="list-style-type: none"> <li>• Federal</li> </ul> | • ADM EMBC                                               |

|                                                                                                                                |                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Bi-lateral (Alberta)</li> <li>• other aid agreements (EMMA, PNEMA and CRC)</li> </ul> |                                                                              |
| <ul style="list-style-type: none"> <li>• Designate Provincial and Regional Staging Areas and logistics routes</li> </ul>       | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Activating Logistics Management System</li> </ul>                                     | <ul style="list-style-type: none"> <li>• EMBC, PS</li> </ul>                 |
| <ul style="list-style-type: none"> <li>• Determine requirements for PERRC activation</li> </ul>                                | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Deploying resources and personnel</li> </ul>                                          | <ul style="list-style-type: none"> <li>• All</li> </ul>                      |
| <ul style="list-style-type: none"> <li>• Restoring services to critical facilities</li> </ul>                                  | <ul style="list-style-type: none"> <li>• CCG</li> </ul>                      |
| <ul style="list-style-type: none"> <li>• Composition and Lead for Recovery Task Force</li> </ul>                               | <ul style="list-style-type: none"> <li>• Office of the Premier</li> </ul>    |
| <ul style="list-style-type: none"> <li>• Activating the Recovery Task Force</li> </ul>                                         | <ul style="list-style-type: none"> <li>• Designated lead ministry</li> </ul> |
| <ul style="list-style-type: none"> <li>• Planning for Sustained Response and Recovery</li> </ul>                               | <ul style="list-style-type: none"> <li>• M-DEC, All</li> </ul>               |

### ***Transition Conditions***

The immediate response end state is based on conditions met, rather than time elapsed. Due to necessary overlap of activities within all phases, this transition is not definitive, but can be measured by the following transition conditions – indicating progress to recovery:

- a. Integrated leadership and coordination established throughout the province and situational understanding and impacts assessments conducted
- b. Life-saving efforts, such as Search and Rescue, are nearing completion
- c. Emergency social services and mass care are established (health, shelter, food and water) in the impact area
- d. Initial assessment of damage complete for critical infrastructure including roads, railways, airports, ports, buildings and systems
- e. Services restored to essential critical infrastructure
- f. Major fires under control and/or not threatening or affecting operations
- g. Establishment of federal and provincial staging areas with movement of relief supplies, response personnel and other critical resources and goods into the impact area
- h. Surge capacity of additional human and other resources deployed/employed to assist both the provincial, local authority and First Nations levels of response
- i. Planning for sustained response and recovery underway and key elements are ready to or are activated

## Sustained Response Phase

During the sustained response, the provincial emergency management system is fully operational with coordinated and integrated operations with local, provincial and federal governments as well as key stakeholders such as IGO/NGO and CI owners. Key activities and decisions will be refined based on further planning analysis, but may include:

| Activities and Decisions                                                                                                                                                                                                                                                                    | Responsibly Authority                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• PECC/PREOC transition to PERRC</li> </ul>                                                                                                                                                                                                          | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Enhanced support from staging areas to points of distribution</li> </ul>                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Regular supply chain processes are re-established with commodities distributed through regular channels</li> </ul>                                                                                                                                 | <ul style="list-style-type: none"> <li>• All</li> </ul>                      |
| <ul style="list-style-type: none"> <li>• Multimodal transportation operations are established and continue to provide support, including strategic airlift assignments and prioritized medical evacuations</li> </ul>                                                                       | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Essential power, water, fuel and transportation systems and other critical infrastructure are restored to functional levels</li> </ul>                                                                                                             | <ul style="list-style-type: none"> <li>• EMBC, MoTI, CI owners</li> </ul>    |
| <ul style="list-style-type: none"> <li>• The provincial Earthquake Recovery Task Force is fully operational and long-term recovery planning is underway and being implemented</li> </ul>                                                                                                    | <ul style="list-style-type: none"> <li>• Recovery Task Force lead</li> </ul> |
| <ul style="list-style-type: none"> <li>• Demobilize international, federal, interprovincial, NGO support measures</li> </ul>                                                                                                                                                                | <ul style="list-style-type: none"> <li>• EMBC</li> </ul>                     |
| <ul style="list-style-type: none"> <li>• Extend, rescind all or certain extraordinary powers in provincial Declaration of State of Emergency (Note: rescinding the provincial Declaration may require local authorities to analyze gaps and implement local states of emergency)</li> </ul> | <ul style="list-style-type: none"> <li>• Minister of Justice</li> </ul>      |

Lines of effort for sustained response will be built on the IRP and developed and refined through continued planning, this includes objectives and transition conditions to set the conditions for recovery. This IRP, combined with future sustained response planning elements, will become a comprehensive response plan.

## Recovery Phase

As threats to life and property are being addressed, a focus must be placed on long-term recovery operations. Some recovery activities will begin in the immediate and sustained response phases and be conducted concurrent to response activities.

Key activities will be refined based on further planning analysis, but may include:

- Establish governance structure for long-term recovery
- The provincial Recovery Task Force is implementing the Recovery Plan, conducting long-term recovery operations and establishing end state conditions for recovery
- Restore critical infrastructure, essential government and commercial services

- Local authorities and First Nations, provincial ministries, federal departments and agencies, critical infrastructure owners and private sector partners are engaged to restore services, promote continuity of government, and economic recovery
- Identify major reconstruction and redevelopment requirements
- Identify future risk reduction strategies

### ***Recovery Task Force***

A comprehensive approach to recovery will likely require the creation of a provincial Earthquake Recovery Task Force responsible for long-term recovery. This may also entail the creation of a new ministry responsible for earthquake recovery. Recovery operations will also require a governance structure different to response with provincial leadership guiding the recovery process.

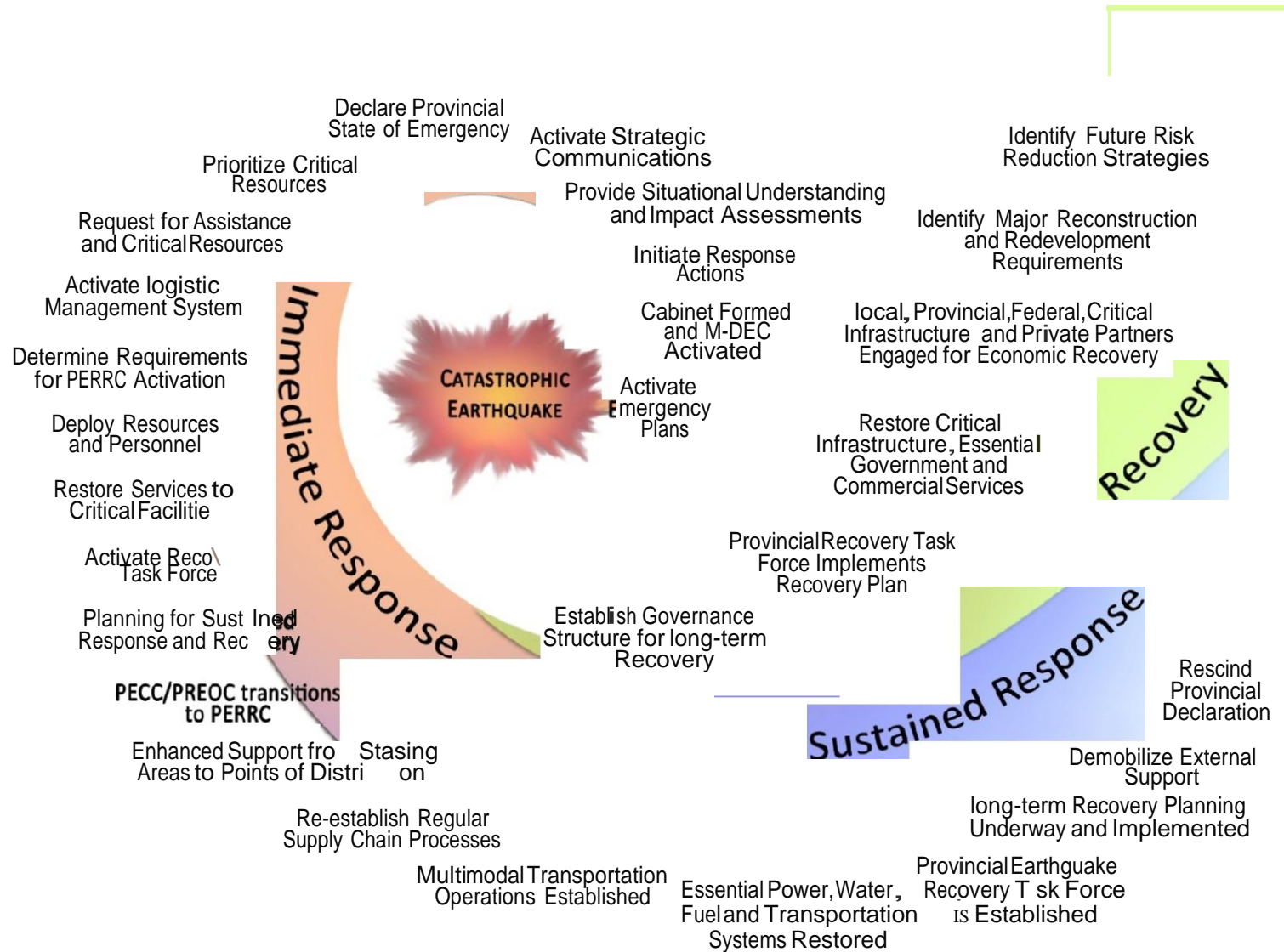
The Earthquake Recovery Task Force will be identified by Cabinet and may include the following provincial ministries and agencies:

- |                                                         |                                                       |
|---------------------------------------------------------|-------------------------------------------------------|
| • Office of the Premier                                 | • Ministry of Transportation and Infrastructure       |
| • Ministry of Finance                                   | • Ministry of Children and Family Development         |
| • Ministry of Social Development and Social Innovation  | • Ministry of Environment                             |
| • Ministry of Community, Sport and Cultural Development | • Ministry of Justice                                 |
| • Ministry of Jobs, Tourism and Skills Training         | • BC Housing                                          |
| • BC Office of the Auditor General                      | • Ministry of Aboriginal Relations and Reconciliation |
| • Government Communications and Public Engagement       | • Ministry of International Trade                     |
| • Ministry of Health                                    | • Industry Training Authority                         |
| • Ministry of Education                                 | • Ministry of Advanced Education                      |
|                                                         | • BC Hydro                                            |

Additional key stakeholders would include, but are not limited to:

- |                                                    |                                  |
|----------------------------------------------------|----------------------------------|
| • Local Governments                                | • NGOs                           |
| • Federal Government                               | • Industry                       |
| • First Nations Leadership Council                 | • BC Civil Liberties Association |
| • Members of the Integrated Disaster Council of BC | • Community Living BC            |
| • CI owners/operators                              | • Insurance Corporation of BC    |
|                                                    | • Insurance Bureau of Canada     |

Figure 2-Response and Recovery Progression

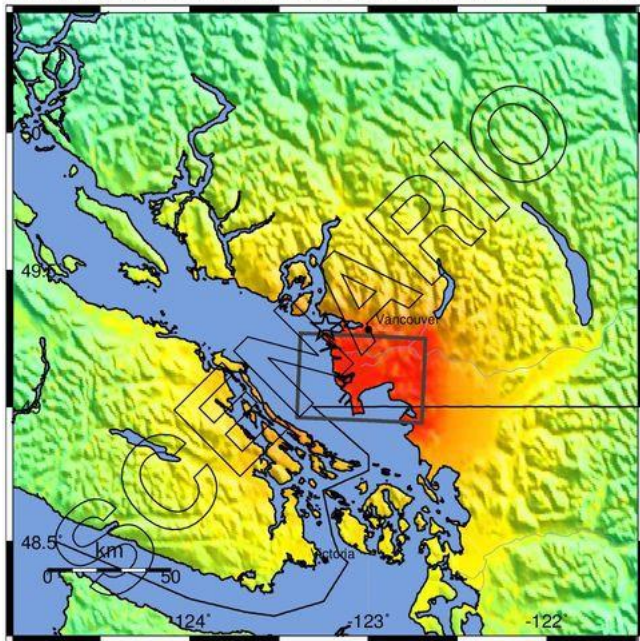


### Section 3: Scenarios and Anticipated Impacts

For the purposes of this plan, we have used two different shallow, crustal scenarios including a M7.3 earthquake beneath Vancouver and a M7.0 earthquake beneath Victoria (Figures 3 and 4)<sup>2</sup>. Both of these separate events have the potential to occur, although the probability is low. That said, these represent the worst-case scenarios for an earthquake event affecting B.C. due to injuries, damage and greatest economic impact, and, as such, present the most challenging hazards to plan for, respond to and recover from.

Figure 3 – ShakeMap for M7.3 in Vancouver

-- Earthquake Planning Scenario --  
 ShakeMap for M7.3\_VancouverAB07 Scenario  
 Scenario Date: OCT 21 2014 05:00:00 AM GMT M 7.3 N49.29 W123.24 Depth: 10.0km



PLANNING SCENARIO ONLY -- Map Version 1 Processed Wed Nov 26, 2014 07:43:29 AM PST

| PERCEIVED SHAKING      | Not felt | Weak   | Light | Moderate   | Strong | Very strong | Severe     | Violent | Extreme    |
|------------------------|----------|--------|-------|------------|--------|-------------|------------|---------|------------|
| POTENTIAL DAMAGE       | none     | none   | none  | Very light | Light  | Moderate    | Mod./Heavy | Heavy   | Very Heavy |
| PEAK ACC. (%g)         | <0.05    | 0.3    | 2.8   | 6.2        | 12     | 22          | 40         | 75      | >139       |
| PEAK VEL. (cm/s)       | <0.02    | 0.1    | 1.4   | 4.7        | 9.6    | 20          | 41         | 86      | >178       |
| INSTRUMENTAL INTENSITY | I        | II-III | IV    | V          | VI     | VII         | VIII       | IX      | X+         |

Scale based upon Worden et al. (2011)

#### Scenario 1: M7.3 Greater Vancouver

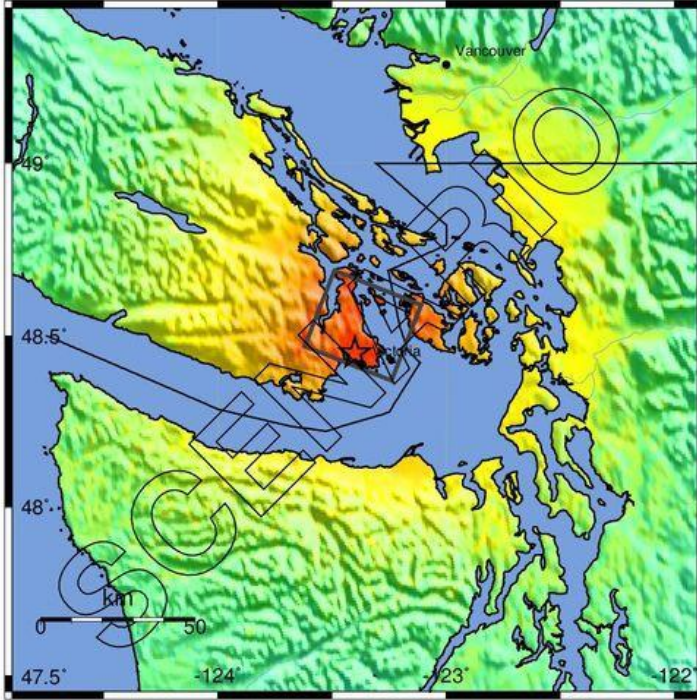
The earthquake magnitude chosen for the Vancouver scenario was M7.3, based on the largest historical earthquake in southwestern BC: the M7.3 Vancouver Island earthquake in 1946. This event occurred in the upper crust and represents the maximum-likely magnitude that could occur in the region. The size of the Vancouver scenario’s fault (see black polygon) was determined from equations that relate earthquake magnitude to fault area. The fault was designed to represent a “blind thrust” where the shallowest edge of the fault (northern edge) is buried beneath 1.5 km of sediment on the Georgia Basin. The fault dips from the northern edge at an angle of 30 degrees to a depth of 22 km at the southern edge with its orientation (or strike) being sub-parallel to Vancouver’s North Shore mountains.

The ground-shaking was calculated for the scenario using equations that relate the earthquake’s magnitude and the fault-to-site distance to a ground-shaking intensity. The calculated shaking intensities were then modified such that ground-shaking at sites on soft soils (e.g. the Fraser River Delta) are “amplified.”

<sup>2</sup> At the request of EMBC, Natural Resources Canada (NRCAN) produced "worst-case" earthquake shaking scenarios for the Greater Vancouver and Greater Victoria regions. NRCAN attempted to produce credible shaking scenarios based on the knowledge of regional tectonic structures that could be, or approach, a worst-case scenario. If these events were to occur, they would be exceedingly rare. The faults used are arbitrary earthquake sources that were conceived to produce severe scenarios for earthquake impacts for emergency planning and preparedness purposes.

**Figure 4 – ShakeMap for M7.0 in Victoria**

-- Earthquake Planning Scenario --  
 ShakeMap for M7.0\_VictoriaAB07 Scenario  
 Scenario Date: OCT 21 2014 05:00:00 AM GMT M 7.0 N48.45 W123.40 Depth: 10.0km



PLANNING SCENARIO ONLY -- Map Version 1 Processed Wed Nov 26, 2014 08:32:26 PM PST

| PERCEIVED SHAKING      | Not felt | Weak   | Light | Moderate   | Strong | Very strong | Severe     | Violent | Extreme    |
|------------------------|----------|--------|-------|------------|--------|-------------|------------|---------|------------|
| POTENTIAL DAMAGE       | none     | none   | none  | Very light | Light  | Moderate    | Mod./Heavy | Heavy   | Very Heavy |
| PEAK ACC.(%g)          | <0.05    | 0.3    | 2.8   | 6.2        | 12     | 22          | 40         | 75      | >139       |
| PEAK VEL.(cm/s)        | <0.02    | 0.1    | 1.4   | 4.7        | 9.6    | 20          | 41         | 86      | >178       |
| INSTRUMENTAL INTENSITY | I        | II-III | IV    | V          | VI     | VII         | VIII       | IX      | X+         |

Scale based upon Worden et al. (2011)

**Scenario 2: M7.0 Greater Victoria**

Unlike the Vancouver scenario, the fault assumed for the M7.0 Greater Victoria scenario does use an existing geologic structure: the Leech River fault. However, undisturbed glacial deposits show the fault has not been active in the last 10,000 years. Based on the geometry of the structure, it is expected that M7.0 is the largest magnitude earthquake that could occur on the segment nearest Victoria. The fault outcrops at the Earth's surface offshore to the south of Victoria and dips at 30 degrees to the north at a depth of approximately 16 km beneath Sidney. Similar to the Vancouver scenario, the shaking intensities are modified by soft surface sediments.



## **General Scenario Description: Thursday at 2:00 p.m., January**

Southwestern B.C. has just recently experienced a “Pineapple Express” rainstorm, bringing continuous, heavy rain and very high freezing levels after a prolonged cold spell in mid-January. Three-day rainfall amounts were in the 180-300 millimetre range. In addition to heavy rains, temperatures increased with freezing levels rising above 2,000 metres, leading to rapid melt of shallow snow packs at mid-elevation and contributing an additional 30 millimetres of run-off in most watersheds. At lower elevations, the frozen ground is unable to absorb the rain or snowmelt.

In the Lower Mainland, areas most heavily impacted include the North Shore and the Chilliwack Valley. This includes localized drainage issues on urban infrastructure, numerous landslides in the mountainous areas of the region, stress on dikes on some medium-sized river watersheds – including the Seymour River, Chilliwack River/Vedder Canal, Squamish River and Coquihalla River at Hope – with water pooling and low-lying flooding in flat terrain in the Fraser Valley.

On southern Vancouver Island, impacts in the Greater Victoria area are limited to urban drainage issues – broken water mains and basement flooding – and low-lying flooding in agricultural areas. Rock falls affect the Malahat highway. River flooding occurs in the Cowichan Valley, including the need for sandbagging and evacuations.

Emergency crews have been working for the past several days on response operations. Several routes have been diverted to avoid flooding, causing increased traffic on major routes. Anticipating longer traffic delays, many parents and caregivers are picking up children from school early and are on the roadways. Downtown cores are full, with business as usual and the majority of the workforce having returned to work from holidays.

For many, the earthquake is heard, before it is felt. The low, rumbling sound is similar to that of a freight train, immediately followed by 10-20 seconds of violent shaking that knocks people located closest to the epicentre from their feet – except for those who remember to ‘drop, cover, and hold on’. Taller buildings sway with the high intensity shaking. Unsecured objects fall or fly through the air. Roads crack and the ground ruptures in some areas. Buildings on softer soils lose support through liquefaction. Landslides and rock falls are generated in many areas, cutting off transportation routes. Flooding is increased by the recent wet weather event with some dikes failing. Several fires start throughout the impact area from damaged electrical power and gas lines. Some buildings collapse, many shift and crack, and others are destroyed by fire.

Windows break and glass scatters across the pavement. Debris is strewn throughout roadways, cutting off access to areas. Entire walls from unreinforced masonry buildings fall into the streets. Many of those who try to run outside suffer extreme injury or death from falling and flying objects and thousands are trapped or injured. Dust, smoke and sirens fill the air.

## Anticipated Impacts

Impacts have been determined using:

- Existing science
- Historical data of similar earthquakes
- Support from Natural Resources Canada
- HAZUS<sup>3</sup>, a natural hazard loss estimation tool

Although the data is based on current scientific and engineering knowledge, it is for planning purposes only and contains a degree of uncertainty. To simplify impact descriptors, 'VAN' is used to denote impacts related to the Greater Vancouver area scenario, and 'VIC' is used to denote impacts related to the Greater Victoria area scenario. All other general impact statements can be applied to both. Losses from the Greater Vancouver scenario are reported for Metro Vancouver only and losses from the Greater Victoria area scenario are reported for the Capital Regional District (CRD) only.

## Effects

- For an earthquake of these magnitudes, strong shaking is the primary effect and will cause the majority of damage, injury and death.
- Secondary effects may include landslides, liquefaction, flooding, and fires. A North American plate earthquake could also produce a localized tsunami triggered by landslide or sub-marine slide.
- Hundreds, or even thousands of aftershocks, some as high as M6.0, can also be expected and will continue for months – many causing additional damage, interrupting response efforts and having psycho-social impacts.

## Buildings

- The near-surface earthquake results in high frequency shaking which is most hazardous to short buildings.
- Unreinforced masonry and unreinforced concrete buildings may suffer the greatest damage, including collapse and inhabatability.
- Buildings that have been constructed on soft soil types, such as fill or reclaimed marsh lands, may experience greater shaking intensity than those constructed on rock and may be more likely to suffer damage.

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<sup>3</sup> Loss estimates were created by Natural Resources Canada using HAZUS loss estimation software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modelled results and the actual losses following a specific seismic event. Loss estimates can be improved by using enhanced inventory data and enhanced earthquake hazard information.

### **Buildings (continued)**

- Modern buildings with inclusion of seismic constraints and industrial steel framed buildings prove the most resistant.
- VAN: 18 per cent of buildings in Metro Vancouver are most likely to receive extensive damage and 12 per cent are most likely to receive complete damage.
- VIC: 18 per cent of buildings in the CRD are most likely to receive extensive damage and 11 per cent are most likely to receive complete damage.

### **Casualties<sup>4</sup> and Medical Facilities**

- Injuries will far exceed fatalities and first responders and medical facilities will be overwhelmed.
- The injury rate, including non-severe, severe non-life threatening, and severe life threatening is 52 injuries per 1000 people in the CRD and Metro Vancouver only.
- Number of fatalities: 4 per 1000 people in the CRD and Metro Vancouver only.
- Medical facilities closest to the epicenter may receive the most damage. Aging facilities that have not undergone a seismic retrofit are especially vulnerable. Facilities located in areas that are prone to liquefaction may receive the greatest amount of damage.

### **Transportation**

- Major transport routes may be damaged or partially functional at a much-reduced capacity for an extended period (weeks to months).
- Many road surfaces may be damaged, some bridges may be closed due to damage and large debris may block through routes.
- The rail network in the impact area may be largely unusable during the immediate response phase.
- VAN: Major transportation facilities located close to the epicenter may receive the greatest amount of damage.
- VIC: Major transportation facilities located close to the epicenter may receive the greatest amount of damage. Those facilities located in areas prone to liquefaction may receive a greater amount of damage.

### **Severe Weather**

- Severity, likelihood and number of landslides and liquefaction points are increased due to recent wet weather.
- Severe weather impacts response efforts and creates need for shelter.

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<sup>4</sup> Casualty estimates are based on structural and non-structural damage to buildings and do not include casualties from such things as underlying medical conditions, car accidents, falls, or psychological impacts or from other natural hazards such as a tsunami.

- Flooding is of increased concern with damage to waterways and infrastructure and formation of debris dams.

### **Lodging**

- Large numbers of people may be in interim housing for months at a time. Medium term lodging and long-term housing is an area of critical concern for sustained response and recovery phases.
- VAN: 4 per cent of the population of Metro Vancouver will require short-term shelter<sup>5</sup>, with the most extreme requirements in downtown Vancouver.
- VIC: 4 per cent of the population of the CRD will require short-term shelter<sup>6</sup>, with the most extreme requirements in the downtown area and Esquimalt.

### **Water/Wastewater**

- Disruption to potable water systems and poor sanitation is expected for several months following the event.
- Lack of water/wastewater may severely impact facilities and reduce operations.
- Public health surveillance may be necessary.
- Broken water mains will challenge fire suppression efforts.

### **Energy and Utilities**

- Infrastructure in impact areas may be damaged, disrupted or inoperable.
- Many gas lines may have ruptured and ignited, destroying buildings, impacting transportation routes and causing injuries and death.

### **Information and Communication Technology**

- Common communication service providers may be impacted, regardless of communication technology provided, including cellular, landline, radio and satellite.
- If service is available, the network may be overloaded, making communication extremely challenging.
- Radio communication, if operable, may be congested and impact the ability of first responders.

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<sup>5</sup> Shelter requirements take into consideration age, ethnicity, income and home ownership of the population. Estimates assume residents of a single-family home that is moderately and extensively damaged or a multi-family home that is moderately damaged will not be displaced. This method estimates only households seeking public shelter and assumes a number of displaced households will stay with friends, relatives or in the family vehicle.

<sup>6</sup> Ibid.

### **Consumer Goods**

- The distribution network of fast moving consumer goods – products that are sold quickly and at relatively low cost, such as meat, fruits and vegetables, dairy products, baked goods, toiletries and cleaning products – may be disrupted. It may take weeks to recover.

### **Economic**

- Economic impacts and disruption to trade may be significant and affect not only the region, but also the country. For example, Port Metro Vancouver (PMV) handles 19 per cent of Canada's Gross Domestic Product and approximately \$500 million/day in cargo – interruption of this, even for a short period of time, would have cascading effects across the country.
- Economic loss may be in the tens of billions of dollars for either scenario, with the greatest amount of loss in the Vancouver scenario.
- Overall building loss ratio (proportion of building assets at risk as a result of earthquake damage)
  - VAN: 29 per cent
  - VIC: 27 per cent

### **Finance**

- Banking services may be largely unavailable, including ATMs and financial transactions such as employee pay services and scheduled payments.
- Economic transactions may be largely reliant on cash.

## Section 4: Leadership and Integration

This section describes the provincial emergency management structure and the required integration of decision-makers and response organizations to affect a coordinated response. The British Columbia Emergency Management System (BCEMS) will guide the response; however, due to the complexity of the event, enhanced integration and flexibility is required with decision makers and between all levels of government, CI owners, NGOs and other stakeholders to encourage innovative solutions, merge decision-making and information sharing networks and to achieve unity of effort by synchronizing effects and resources.

This will be realized by having a centralized location for elected officials and decision-makers, agency co-location, provision of liaisons, and integrated planning and collaboration. This integration will be required at multiple levels, including local government EOCs, PREOCs, and the PECC or PERRC.

### British Columbia Emergency Management System

BCEMS is a provincial emergency management system founded on the principles of the Incident Management System (ICS) and includes common language, span of control, and management by objective and scalability. BCEMS ensures a consistent, coordinated and organized response to emergency events and disasters and is used across ministries and jurisdictions in B.C.

BCEMS identifies four operational levels:

- 1. Site level** – Response on-site is directed by single command or unified command from a single on-site incident command post or, if there are several sites, by Area Command. Responders may represent all levels of government and the private sector.
- 2. Site support** – When the site level response requires off-site support, an EOC, including local government, and the private sector, may be activated to:
  - provide communication with the site level
  - provide policy guidance
  - manage the local multiple-agency support to the site level
  - acquire and deploy additional resources, obtained locally, from other EOCs or the provincial regional level
- 3. Provincial regional coordination** - The provincial regional coordination level acts in support of the site support level, through PREOCs, and:
  - manages the assignment of multiple-ministry and agency support to individual site support locations or multiple site support level locations,
  - acquires and deploys resources at the request of the site support level

#### BCEMS response goals:

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

- provides emergency response services where incidents cross local authority boundaries, or where local authorities are not organized to fulfill their role

4. **Provincial central coordination** – The provincial central coordination level, through the PECC or PERRC, manages the overall provincial government response, which includes the provision of support for the regional levels, and:

- seeks direction of senior elected officials
- obtains authority of the minister for a declaration of a provincial emergency
- provides provincial policy guidance
- establishes provincial priorities
- manages provincial emergency public information activities
- manages the acquisition and deployment of provincial, federal, inter-provincial and international resources
- provides coordination and other support services to provincial MOCs and Crown corporation operations centres, as well as federal emergency response agencies.

### **Provincial Emergency Management Structure**

BCEMS defines the provincial emergency management structure for managing an emergency in four levels of response: Provincial Central Coordination (PECC/PERRC, CCG and M-DEC); Provincial Regional Coordination Site Level (PREOC); Site Support Level (Local Government EOC); and Site (On-site response). The Provincial Central Coordination level manages the overall provincial government response and prioritizes provincial government objectives in response to the emergency requirements of the other levels. It also serves as the coordination and communication link with federal and international counterparts as well as ministry emergency operations (through Ministry Operations Centres). To reinforce the provincial emergency management structure a Provincial Coordination Team will be deployed to assist with response operations.

#### ***Ministers-Deputies Emergency Committee (M-DEC)***

The M-DEC comprises the key ministers and deputies involved in the management of the provincial response to a damaging earthquake. The M-DEC will provide high-level policy decisions. It will also ensure the full complement of B.C. government human and material resources, from all ministries, crown corporations and agencies, are committed in support of the overall government response.

#### ***Central Coordination Group (CCG)***

The Province will activate a CCG to ensure cross-government and multi-agency coordination and strategic and policy direction to the Director of the PECC. The primary function of the CCG is to provide strategic direction as well as oversight of provincial integrated emergency response and recovery activities to the PECC or the PERRC. The CCG is chaired by the ADM of EMBC and will include provincial senior officials representing affected ministries and program operations devoted to public safety, as well as federal representatives and stakeholders. The CCG will not direct tactical operations, and will rely on the PECC or the PERRC to execute operations on its behalf.

#### ***Provincial Emergency Coordination Centre (PECC)***

The PECC coordinates the integrated provincial emergency response according to strategic directions received from the M-DEC and the CCG. The PECC, through the CCG, ensures provincial government senior officials are kept apprised of provincial response activities and situational understanding. The

PECC serves as a central point for the collection, analysis, and dissemination of information and for making provincial operational decisions and supports PREOCs.

The PECC is organized according to BCEMS to promote ease of communication between agencies and to ensure common objectives across emergency management levels. Branches and units are activated as required to coordinate provincial level response or when local governments and/or PREOC resources are exhausted (see [Annex D for an expanded PECC Organizational Function Chart](#)).

During the immediate response phase, the PECC will maintain overall command and coordination of the integrated provincial response. The PECC will initially reside at EMBC headquarters in Victoria, but may be established in an alternate location as deemed necessary by the event to provide the best effect.

### ***Provincial Earthquake Response and Recovery Centre (PERRC)***

When the scope of the emergency, the scale of response, and complexity of the event requires extensive cross-agency integration and coordination for an extended period of time, the province will likely establish a PERRC. The requirement for the PERRC will be determined by EMBC during the immediate response phase and will be activated during sustained response. Until the PERRC is established and transition of response coordination is possible, the PECC will coordinate provincial response.

The PERRC will be established in a facility capable of incorporating several hundred people and be comprised of EMBC, provincial ministries, federal departments and agencies, and regional, national and international stakeholders. The PERRC will be a centralized location for decision-making, response operations, advanced planning, strategic communications and integration. The PERRC will likely include responsibilities of the PECC and impacted PREOC(s) and will:

- provide overall provincial coordination
- support local authorities and First Nations
- coordinate overall earthquake response actions
- set the conditions for recovery with the co-location and integration of a Recovery Task Force

The PERRC, through a JIC, will coordinate large-scale media relations, public information and strategic communications at the provincial level to ensure consistent, coordinated public messaging.

The PERRC is not a pre-established facility. The location will be determined by EMBC and established in an area to provide the best effect.

With transition to recovery, the Recovery Task Force will assume command and the PERRC will become the Provincial Earthquake Recovery Centre responsible for overall provincial coordination to earthquake recovery. With this transition, the PECC and PREOC functions will be extracted from the centre to return to normal operations.

### ***Ministry Operations Centres (MOCs)***

Provincial ministries have MOCs that will be activated to co-ordinate ministry response to the emergency and continuity of ministry business. MOCs will advise on status of ministry operations and



business resumption either by providing a liaison to the PECC/PERRC or through liaison with the Government Services Branch at the PECC/PERRC. At the regional level, collaboration between the Ministry Regional Emergency Operation Centres and EMBC will occur through agency representatives located in the PREOC.

### ***Provincial Regional Emergency Operations Centre***

Each geographic region within the province has facilities and capacity to operate a PREOC ([See Joint Operations Area](#)). Each PREOC coordinates regional response activities, supports local EOCs, assigns regional (provincial and federally assigned) critical resources, provides regional messaging, and provides situational understanding to the PECC/PERRC. If required, PREOCs located outside the impact area will be activated to provide additional support. When the PERRC is activated, PREOCs located within the impact area will be incorporated in the PERRC.

### ***Local Authority EOC***

The local authority has primary responsibility for the management of an emergency response within their jurisdiction. Local authorities will activate their EOCs to support site activities and perform other functions, including the implementation of extraordinary powers to address the emergency. Local EOCs will conduct impact assessments (see [Section 7: Situational Understanding](#)) and through communication and integration with PREOCs will request resources and capabilities, conduct advanced planning, and share information to assist with response operations and contribute to the provincial common operating picture.

This plan assumes local authorities will activate emergency plans and maintain control and direction of the response within their jurisdictional boundaries. The following are anticipated response actions for local authorities:

- First responders at the local level (site) will remain responsible for managing and conducting emergency operations
- Initiate actions to save lives in support of the site command
- Activate emergency plans and directly control the resources available under local authority jurisdiction for the purpose of emergency response and recovery
- Execute response using jurisdictional resources as well as resources available through mutual aid/assistance agreements
- Establish communication with regional and provincial partners
- Establish EOC. If EOC and alternate location is not operational, local authorities should initiate agreements to join EOCs in their adjacent jurisdictions.
- Integrate with provincial response operations through PREOCs and the PERRC, once established

## **Other Co-ordinating Elements**

### ***Provincial Coordination Team (PCT)***

The PCT is a cross-government, multifunctional provincial asset of experienced emergency managers and technical specialists with varied skills designed to be available on short notice to provide enhanced coordination support.

In response to a catastrophic earthquake event, the PCT will be activated and deployed by the ADM of EMBC. The PCT is designed to be flexible and will be deployed for the following potential tasks:

- On the ground situational understanding and analysis
- Reinforcing and setting the conditions for integration with local governments and stakeholders
- Reinforcing PREOCs and PECC
- Confirm location and establish the PERRC as determined by EMBC

***Metro Vancouver Regional Advisory Group***

For a catastrophic earthquake event affecting the Greater Vancouver area, the SWE PREOC will activate the Metro Vancouver Regional Advisory Group and facilitate a conference call with Chief Administration Officers (CAOs). The SWE PREOC will describe the emergency situation, present the regional issue(s) and identify potential options for resolution. The CAOs will offer any further situational understanding that may change the options presented and will consult with SWE PREOC on a course of action that best meet the needs of the region. This may require local authorities making resources available to support a critical need in a neighbouring jurisdiction.

Figure 5 -ProvincialEmergency Management Structure-PECC Activated

# Provincial Emergency Management Structure

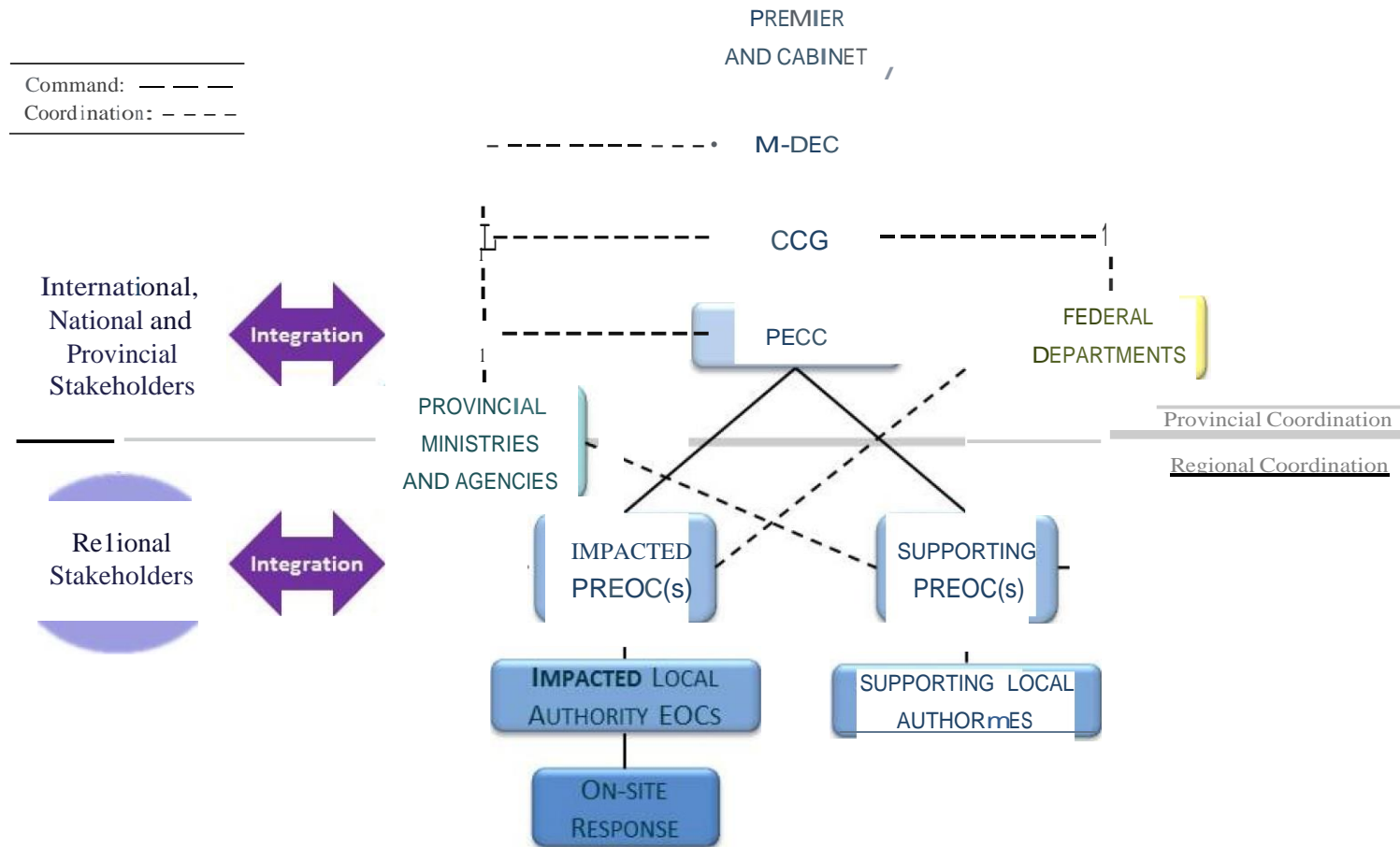
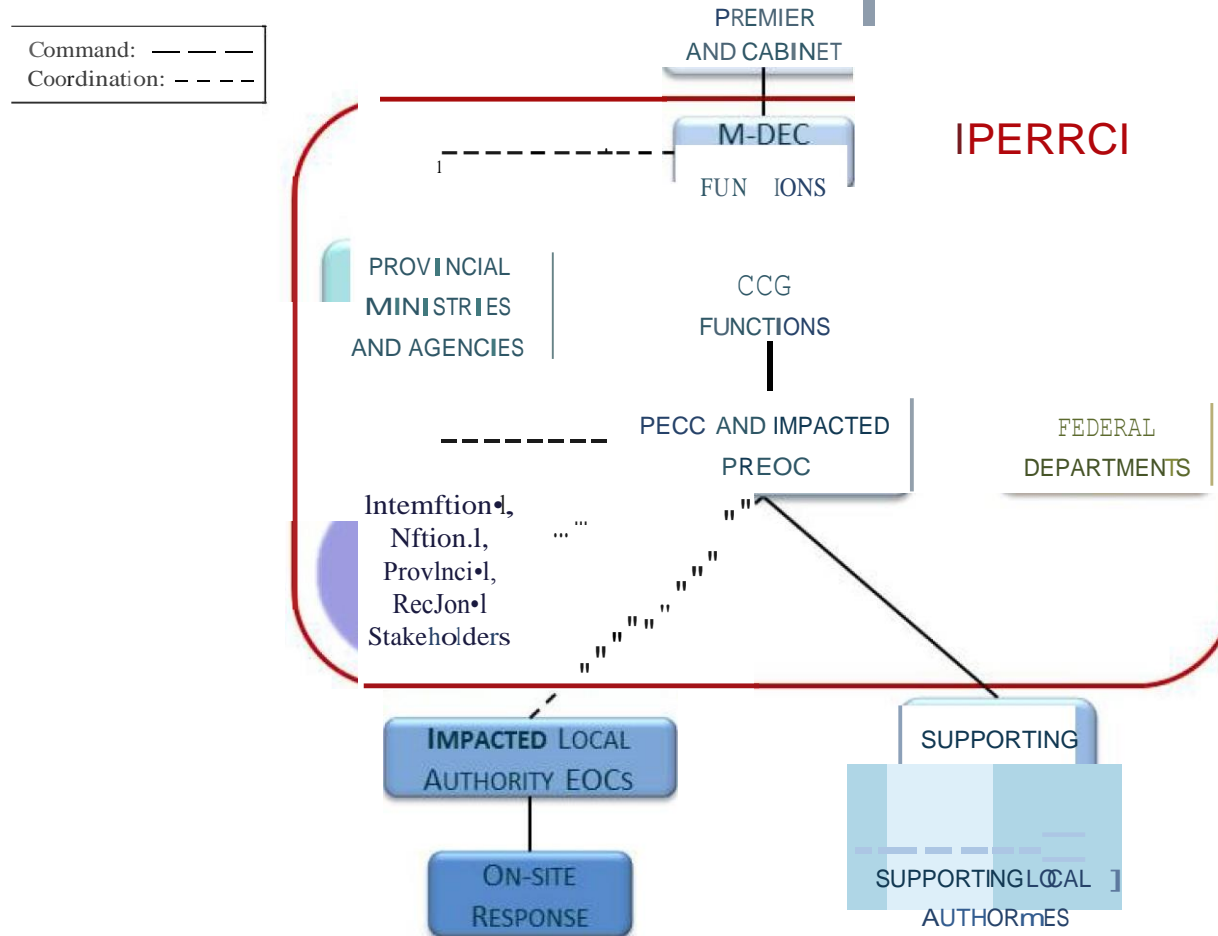


Figure 6–Provincial Emergency Management Structure–PERRC Activated

# Provincial Emergency Management Structure PERRC Activated



## **Immediate Integration Contingencies**

### ***Vancouver Earthquake Scenario***

If the SWE PREOC is operational an assessment of additional needs through a gap analysis will be conducted with reinforcements deployed to the SWE PREOC.

If the SWE PREOC is not operational the PECC will assume control and responsibility for the SWE PREOC.

For either possibility, the PECC function will move, when able, to the lower mainland with the establishment of the PERRC to effect greatest influence in support of local governments. The PERRC will then contain both functions of the PECC and SWE PREOC.

### ***Victoria Earthquake Scenario***

If the PECC/VIR PREOC are operational, an assessment of additional needs through a gap analysis will be conducted with reinforcements deployed to the PECC/VIR PREOC.

If the PECC/VIR PREOC are not operational and/or the SWE PREOC cannot communicate with the PECC/VIR PREOC, the SWE PREOC will assume temporary command and responsibility until the PECC/VIR PREOC is operational and communications are re-established.

If the Keating facility is not viable, the PECC/VIR PREOC will activate at its alternate site.

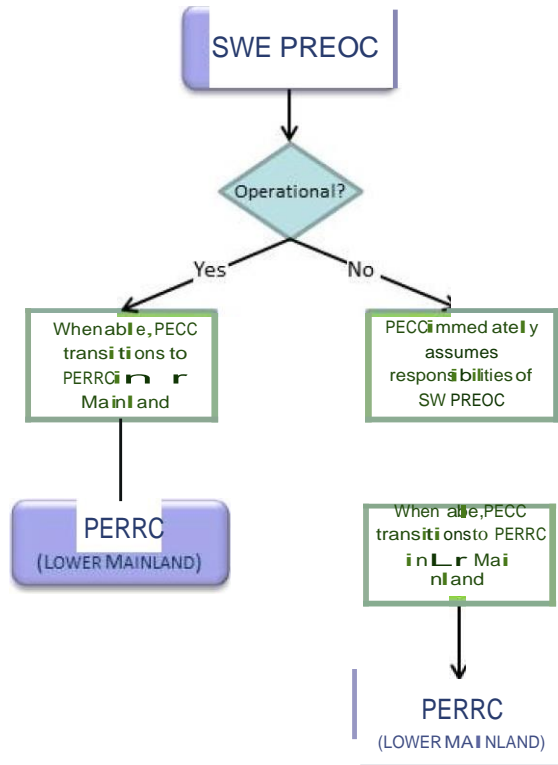
For transition to the PERRC, the PECC and VIR PREOC functions will move to an alternate location in the Greater Victoria area.

*See Figure 7 – Immediate Integration Contingencies*

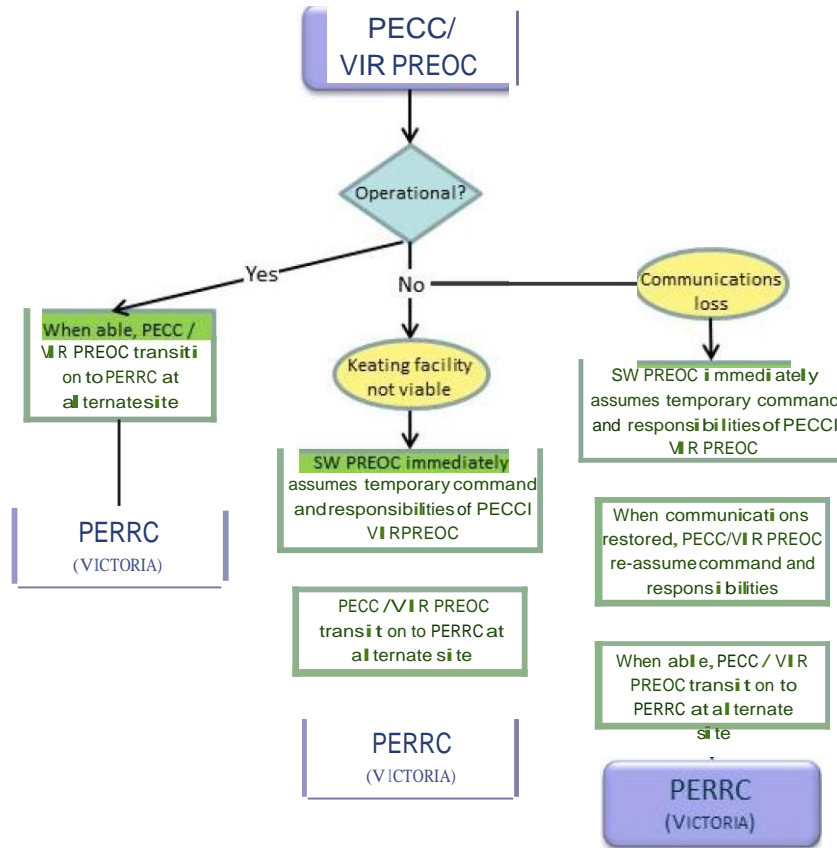
Figure 7 - Immediate Integration Contingencies

# Immediate Integration Contingencies

## Vancouver Earthquake Scenario



## Victoria Earthquake Scenario



## Section 5: Response Actions

This section identifies both common and anticipated response actions of all levels of government, critical infrastructure owners, and agencies. Actions listed do not contain standard response tasks and are not exhaustive.

***The following is a list of response activities common to all:***

- Activate emergency response and business continuity plans
- Initiate agency immediate response actions
- Verify functioning communications systems and linkages with other response agencies
- Communicate, share information, and make requests through appropriate level of the provincial emergency management structure
- Compile, update and share impact assessments with province as per template provided at [Annex J: Impact Assessment Template](#) (see Section 7: Situational Understanding)
- Provide PEOC or PECC/PERRC with consolidated and prioritized personnel, equipment and supply requests, including anticipated needs

### Local Authorities

Upon activation of the IRP, the Province will declare a State of Emergency (see [Annex B: Provincial Declaration State of Emergency](#)); therefore, local authorities will not be required to declare individual States of Local Emergency. The Province's State of Emergency will include authorization for local authorities to utilize emergency powers described in the EPA to support local emergency response activities.

The IRP assumes local authorities will activate emergency plans and maintain control and direction of the response within their jurisdictional boundaries. The following are anticipated response actions for local authorities:

- First responders at the local level (site) will remain responsible for managing and conducting emergency operations
- Initiate actions to save lives in support of the site command
- Activate emergency plans and directly control the resources available under local authority jurisdiction for the purpose of emergency response and recovery
- Execute response using jurisdictional resources as well as resources available through mutual aid/assistance agreements
- Establish communication with regional and provincial partners
- Establish EOC. If the EOC and the alternate location is not operational, local authorities should initiate agreements to join EOCs in their adjacent jurisdictions
- Integrate with provincial response operations through PEOCs and the PERRC, once established

### ***Metro Vancouver Regional Advisory Group***

For a catastrophic earthquake event affecting the Greater Vancouver area, SWE PEOC or any one of the Chief Administration Officers (CAOs) will activate the Metro Vancouver Regional Advisory Group. The following actions include:

- CAOs of Metro Vancouver Regional Advisory Group will participate in conference calls coordinated by the SWE PREOC that describe the emergency situation, present the regional issue(s) and identify potential options for resolution
- CAOs will offer further situational understanding that may change the options presented and will consult with SWE PREOC on a course of action that best meet the needs of Metro Vancouver
- Local authorities will make resources available to support a critical need in a neighbouring jurisdiction, if required

## Emergency Management BC

### ***Provincial Emergency Coordination Centre (PECC)***

- Activate provincial emergency management structure
- Activate the IRP
- Contact EMBC ADM, Minister of Justice or the Lieutenant Governor to declare a Provincial State of Emergency
- Establish communication with PREOCs and Government Operations Centre (GOC)
- Conduct initial impact assessments and gain situational understanding from PREOCs, NRCan, Department of National Defence, MoTI, and CI owners.
- In coordination with partners, consolidate regional, provincial and federal assessments to develop and share a common operating picture (COP)
- Contact GOC to request federal assistance (See [Annex C-2: Request for Federal Assistance \(RFA\) Letter](#) and [Annex I: Critical Resource List](#))
- Contact JTFP to request activation of CONPLAN PANORAMA
- Contact Government of Alberta via AEMA to request activation of *Alberta Emergency Response Plan For a Catastrophic Earthquake in B.C.* and in coordination with the GOC, to deploy critical resources (See [Annex I: Critical Resource List](#))
- Through authorization of EMBC ADM, deploy the PCT
- Contact Canadian Red Cross Society to request activation of Emergency Response Units (ERUs) and the Provincial Call Centre
- Support the continuity of government and provincial business continuity requirements
- Initiate Logistics Management System and confirm location and activation of Provincial Staging Areas
- Follow the information collection plan containing critical information requirements (see [Annex G: Critical Information Requirements](#)) to create a COP
- Manage and direct the use of international assistance
- Identify, prioritize and procure critical resources (See [Annex I: Critical Resource List](#))
- Activate the EMBC Social Media Unit
- Monitor traditional media, volunteer groups and private industry
- Provide provincial messaging in coordination with GCPE
- Ensure provincial senior officials are apprised of provincial response activities



### ***Southwest (SWE) and Vancouver Island Region (VIR) PREOCs***

- SWE PREOC to be prepared to assume responsibilities of the PECC if the PECC is not operational or if communication is not established with the PECC
- Establish contact with and support impacted local authorities and First Nations, regional ministry offices and agencies
- Confirm location and activation of Regional Staging Areas in coordination with the PECC and Central PREOC
- Coordinate resources to support evacuations with local authorities and First Nations
- Liaise with the MoTI / Regional Transportation Management Centre (RTMC), local governments for status of and support required for key and critical transportation routes
- Support local authority and First Nation provision of emergency social services and mass care
- Liaise with impacted jurisdictions and collect information requirements as per template provided at [Annex J: Impact Assessment Template](#)

### ***Central (CTL) PREOC***

- Activate and manage provincial Logistics Management System (LMS) and inform the PECC of the status of Provincial and Regional Staging Areas
- Coordinate with the municipalities of Kamloops, Kelowna, Prince Rupert, Prince George and Cranbrook regarding the activation of the Provincial Staging Areas
- Coordinate with the Vancouver Airport (YVR), Abbotsford Airport (YXX), PMV and Port of Squamish regarding the activation of Regional Staging Areas to support the Lower Mainland and Sunshine Coast
- Coordinate with the Victoria Airport (YYJ) and Nanaimo Airport (YCD) regarding the activation of the Regional Staging Areas to support southern Vancouver Island
- Coordinate with the Comox Airport (YQQ) and the Port Hardy Airport (YZT) regarding the activation of the Regional Staging Areas to support northern Vancouver Island and remote coastal mainland
- Liaise with MoTI and local governments for status of and support operations to reopen key transportation routes within jurisdictions

### ***Northeast (NEA), Northwest (NWE), and Southeast (SEA) PREOCs***

- Confirm location and activation of Provincial Staging Area in coordination with the PECC and CTL PREOC
- Assist CTL PREOC with activation of Provincial and Regional Staging Areas as directed by CTL PREOC
- Liaise with MoTI and local governments for status of and support operations to reopen key transportation routes
- Monitor and support emergency response efforts unrelated to the earthquake event outside the impact area
- Be prepared to support emergency response activities unrelated to the earthquake event
- Identify and provide personnel and equipment to assist other regions

## **Provincial Strategic Governance**

### ***Lieutenant Governor***

- Ensure the continued existence of government in the Province of British Columbia
- Provide Royal Assent to provincial legislation
- Sign orders-in-council, proclamations and other official documents before they have the force of law
- Present Bills by Message into the Legislature when relating to taxation or expenditure of public money

### ***Office of the Premier***

- Provide leadership and strategic direction to the M-DEC
- Provide strategic communication
- Convene Cabinet to establish strategic response and recovery priorities

### ***Ministers-Deputies Emergency Committee (M-DEC)***

- Provide executive level policy decisions, strategic direction and support to the CCG
- Validate the need for a declaration of a provincial State of Emergency
- Authorize extraordinary funds to support emergency management activities
- Ensure the full support of all provincial ministries, crown corporations and agencies to the integrated government response
- Approve the B.C. government communication strategy and support GCPE in implementing the provincial public information strategy
- Confirm critical resource prioritization
- Provide strategic guidance for sustained response and recovery

### ***Central Coordination Group (CCG)***

- Share information and situational understanding between ministries
- Evaluate the situation and assess the provincial government's involvement
- Report to M-DEC
- Provide strategic and policy direction to the PECC
- Oversee the implementation of the BC government communication strategy
- Prioritize critical resources in conjunction with the PECC/PERRC

## **Provincial Ministries, Agencies and Crown Corporations**

Provincial ministries will activate MOCs, review ministry mission critical services, gather situational understanding and assess impacts to ministry business, activate ministry emergency and business continuity plans and liaise with the Government Services Branch of the PECC/PERRC.

All ministries are to provide staff to the Temporary Emergency Assignment Management System (TEAMS) which allows staff to be assigned roles within emergency operation centres to increase surge capacity for integrated provincial response. Provincial ministries will also provide a ministry operational liaison to the PECC/PERRC to support response operations. Crown Corporations will also integrate response efforts through the provision of liaison(s) to the PECC/PERRC and/or PREGOC. Provincial ministries and agencies that do not have specific response tasks identified need to anticipate requests for support to the response and recovery effort and integrate with provincial operations, as required.

***Aboriginal Relations and Reconciliation***

- Provide expertise and/or policy direction regarding First Nations and act as liaison to First Nations communities

***Advanced Education***

- Provide a Post-Secondary Institution (PSI) liaison to the PECC/PERRC to support the Emergency Social Services Branch
- Provide expertise and/or policy direction regarding PSI requirements and accountabilities
- Provide support to PSIs in order to meet the immediate needs of students during the emergency
- Provide impact assessments of PSI facilities, where possible, in the impact areas
- Support the coordination and access to PSI facilities and resources during an emergency

***Agriculture***

- Establish and lead the Agriculture Branch at the PECC/PERRC
- Coordinate support and/or managing agricultural animal relocation
- Provide advice to farmers, aquaculturalists and fishers on the protection of crops, livestock and provincially managed fish and marine plant stocks
- Consult with and provide support to impacted agricultural industries
- Assist the Ministry of Health with inspection and monitoring of food safety and quality
- Develop emergency response plans for and monitor and diagnose animal disease
- Administer provision of crop insurance

***BC Assessment Authority***

- Coordinate and provide collated assessment information related to building damage assessments
- Provide mapping services
- Provide inventory of pipelines and other linear structures throughout the province

***BC Coroners Service***

- Lead the Mass Fatality Branch at the PECC/PERRC
- Activate the Mass Fatality Response Plan
- Designate a temporary morgue and fatality collection points
- Coordinate with search technicians to support timely and appropriate recovery of deceased victims
- Take custody of deceased once remains are recovered
- Ensure appropriate transportation and storage of deceased
- Ensure identification and cause of death are established and issue the Medical Certification of Death
- Manage the chain of custody for deceased and belongings found on their person
- Lead and coordinate public reporting regarding confirmation of death and identification of deceased
- Liaise with the Family Assistance Centre

***BC Ferries***

- Provide a liaison to the PECC/PERRC to support the Transportation Branch within the Operations Section
- Provide impact assessment of BC Ferries infrastructure

- Provide priority loading for emergency personnel, equipment and supplies
- Ensure ferries are available to serve as reception centres, hospitals, response centres or other emergency facilities

### ***BC Housing***

- Establish and lead the Building Damage Assessment Branch at the PECC/PERRC
- Support the Emergency Social Services Branch at the PECC/PERRC
- Provide rapid damage assessment teams, prioritize and coordinate rapid damage assessment of provincial and other key facilities
- Provide rapid damage assessment training, assessment coordination, action plans, response/recovery priorities and authority to access and restrict access to government housing property
- Provide group lodging assistance by coordinating and deploying the provincial group lodging stockpile, and by coordinating the provision of emergency lodging facilities, and facility management

### ***BC Hydro***

- Provide a liaison officer to the PECC/PERRC and PREOC to support the CI Branch
- Provide impact assessment of BC Hydro infrastructure, status of outages, anticipated resource challenges and restoration priorities
- Coordinate the restoration of electric facilities, taking into account domestic, commercial, industrial and government responsibilities
- Interrupt hydro services when they pose a threat to life or property
- Conduct safety measures with respect to BC Hydro dams, including initiating warnings in the event of dam failures
- Liaise with PECC/PERRC to gain access to air reconnaissance flights

### ***BC Oil and Gas Commission***

- Acts as a liaison between industry operators and the provincial emergency management structure to provide situation updates related to threatened oil and gas assets
- Assist the PECC/PERRC and PREOCs with fuel management plans
- Establish liaison with oil and gas providers and coordinate situational understanding
- Liaise with PECC/PERRC to gain access to/or provide air reconnaissance flights

### ***BC Rail***

- Provide priority movement of emergency personnel, equipment and supplies
- In cooperation with Transport Canada, assist in railway crashes and derailments in the conduct of rescue operations, removal of debris and the cleanup of hazardous material
- Provide railcars for emergency facilities
- Provide specialized equipment

### ***BC Transit***

- Provide a liaison to the PECC/PERRC to support the Transportation Branch within the Operations Section
- Provide impact assessment of BC Transit systems and infrastructure
- Coordinate requirements for response personnel and public transportation, including school and privately owned buses

### ***Children and Family Development***

- Provide a liaison to the PECC/PERRC to support the Emergency Social Services Branch
- Provide for the safety of children in care and unaccompanied children
- Provide expertise and/or policy direction regarding reunion services; child protection; children and youth with special needs; and child and youth mental health

### ***Community, Sport and Cultural Development***

- Provide advice and support for efforts related to local government infrastructure, governance or emergency authority, as well as specific community impacts.

### ***Education***

- Provide a liaison to the PECC/PERRC to support the Emergency Social Services Branch
- Provide expertise and/or policy direction regarding school system requirements and accountabilities
- Provide support to school boards and school districts to interpret policy and revise guidelines in order to meet the immediate needs of students during the emergency
- Provide the status of school facilities in the impact areas
- Support the coordination and access to school facilities and school district resources

### ***Energy and Mines***

- Support the Critical Infrastructure Branch at the PECC/PERRC
- Liaise with agencies, boards and commissions with emergency management roles and other utility providers coordinate impact assessments

### ***Environment***

- Establish and lead the Environmental Branch at the PECC/PERRC
- Provide impact assessment associated with the environment
- Support and coordinate responses to hazardous material spills
- Provide technical expertise, assess and monitor air and water quality
- Provide professional and technical advice and guidance on waste management issues
- Ensure the proper disposal of hazardous wastes and pollutants
- Provide conservation officers to act as special constables to reinforce police forces in law and order and traffic duties
- Support exceptions/amendments to transportation of dangerous goods and landfill permits (e.g. debris)
- Provide emergency response to fire, avalanche, flood, tsunami or other circumstance that requires evacuation and/or closure of parks

### ***Finance***

- Establish and lead the Finance Section at the PECC/PERRC
- Process provincial government financial expenditures
- Process relief claims, when approved, and service contracts
- Estimate the financial impact of damage
- Work with the PECC/PERRC Critical Infrastructure Section and financial institutions to provide service to the public under emergency conditions
- Provide risk management services for possible compensation and liability claims

- Coordinate, in cooperation with ministries, the establishment and maintenance of emergency financial management and response
- Provide corporate accounting services

### ***Forest, Lands and Natural Resource Operations***

- Establish and lead the Air Branch (led by BC Wildfire Services) and Water Branch at the PECC/PERRC
- Provide personnel, equipment, supplies, telecommunications equipment, aviation support and weather information to assist response operations
- Support or lead damage assessment related to dam and dike safety
- Provide information and spatial mapping support (GeoBC)
- Provide professional guidance to direct works to restore or continue access; deal with environmental mitigation works, and reduce safety risk
- Landslides: conduct analysis, emergency and mitigation planning, and provide recommendations on mitigation, restrictions, and evacuations

### ***Government Communications and Public Engagement (GCPE)***

- Establish and lead the Information Branch at the PECC and PREOCs
- Establish and lead the JIC at the PERRC
- Coordinate provincial public and manage media information
- Act as Information Officers in provincial and local authority operations centres as required
- Monitor media, report findings and clarify/correct factual errors as necessary
- Establish a provincial communications strategy
- Coordinate social media messaging

### ***Health***

- Establish and lead the Health Branch at the PECC/PERRC
- Activate the Health Emergency Coordination Centre (HECC)
- Identify available capacity across the health sector and, as necessary, coordinate any transport requirements for the provision of personnel, equipment and supplies to the impact area
- Liaise with the PECC/PERRC to arrange medical evacuation out of impact area
- Coordinate the provision of additional medical teams to the impact area
- Coordinate the provision of mental health and disaster psychosocial services to both disaster responders and the general public, including: providing education and information on stress management; providing access to one-on-one support; assisting with worker care and shift scheduling; ensuring access to healthy food and water, and; offering problem solving techniques.
- Coordinate any international medical assets deployed to B.C.

### ***Health Authorities***

#### ***Acute/critical, residential care, home health, mental health, other community services***

- Establish contact with the HECC and PREOCs
- Manage patient surge
- Determine physical condition and operational capability of health facilities within the impact area
- Evacuate facilities identified as unsafe

- Identify and prioritize patients/residents for evacuation/relocation
- Identify appropriate patient/resident destinations and establish pick-up/drop-off details with BC Ambulance Service (BCAS)
- Work with BCAS to move patients to designated evacuation assembly areas with relevant documentation
- Establish appropriate alternative locations for the provision of care
- Forward consolidated non-medical support requests to HECC including requests for supplies, equipment, engineering, utilities and transport

***Public Health***

- Expand Public Health services with an emphasis on sanitation, education and disease prevention
- Enhance radiological and toxological services as required

***BC Ambulance Service and BC Patient Transfer Network***

- Establish contact with HECC, PREOC and PECC/PERRC
- Respond in accordance with the provisions of the Mass Casualty Plan
- Determine and prioritize the number of patients requiring evacuation and co-ordinate with HECC, PREOC and the PECC/PERRC for transportation

***Justice***

- Provide status updates of provincial and federal corrections facilities and anticipated resource needs within the impact area in support of the Police Branch
- Assist with risk management and provide expertise, including providing advice to provincial ministries and government corporations on legal matters relating to the preparation and promulgation of emergency orders, regulations, declarations and contractual arrangements

***Liquor Distribution Branch / BC Liquor Stores***

- Provide a liaison to the PECC/PERRC to support the Transportation Branch and Logistics Section
- Provide impact assessment of LDB infrastructure
- Provide warehouse space, personnel and logistical expertise for the distribution of supplies
- Assist in the distribution of emergency supplies

***Natural Gas Development***

- Liaise with major agencies, boards and commissions with potential emergency management roles including Oil and Gas Commission, BC Housing Management Commission, and British Columbia Safety Authority

***Office of the Auditor General of British Columbia***

- Provide expertise in the management and distribution of funds received by donation

***Office of the Fire Commissioner***

- Establish contact and provide a liaison to the PECC/PERRC and PREOCs to establish the Fire Branch
- Initiate communications with fire departments throughout the province to confirm available resources

- Appoint regional Office of the Fire Commissioner (OFC) positions outside of impact areas with regional staging capabilities
- Appoint district OFC positions to manage resources within impact area
- Consolidate and prioritize lists of personnel, supplies and equipment requiring transport into and from the impact areas

***Public Service Agency***

- Create surge capacity for provincial response and provide expertise and/or policy direction regarding human resources
- Provide messaging to public service staff and risk management services for possible compensation and liability claims
- Oversight of employee pay

***RCMP, Police and Community Safety and Crime Prevention Branch***

- Establish contact with and provide a liaison to the PECC/PERRC to establish the Policing and Security Branch
- Prepare, share and implement orders relating to law enforcement and internal security
- Provide through the jurisdictional police force:
  - Advice to local authorities respecting the maintenance of law and order
  - Reinforcement of local police services
  - Security control of emergency areas
  - Traffic and crowd control

***Shared Services BC***

- Provide technical advice and assistance with the acquisition of telecommunications infrastructure, equipment, systems, services and computers
- Provide priority allocation of government buildings for operational accommodation, storage or other emergency requirements
- Make emergency rental or lease agreements for private sector buildings or other infrastructure
- Provide government vehicles
- Provide for leasing or purchase of emergency supplies and equipment
- Provide corporate accounting services
- Facilitate printing and mail distribution services through BC Mail Plus
- Assesses damage(s) to government buildings

***Social Development and Social Innovation***

- Provide a liaison to the PECC/PERRC to establish and lead the Emergency Social Services Branch
- Provide for increased requirements for Income and Disability Assistance
- Provide counselling to affected people
- Provide situational understanding on community living services to assist adults with developmental disabilities and their families and anticipated resource challenges

***Technology, Innovation and Citizens' Services***

- Provide a liaison to the PECC/PERRC to support the Logistics Section and Advanced Planning Unit
- Co-ordinate recovery of provincial government network infrastructure
- Provide situational understanding, impact assessment and anticipated resource solutions



- Procure, support and coordinate space, communication and technology requirements for the provincial response

### ***Transportation and Infrastructure***

- Establish and lead the Transportation Branch within Operations Section the PECC/PERRC and PREOCs
- Coordinate and maintain up-to-date status reports of key transportation infrastructure (all modes) and critical routes
- Develop and share an authoritative transportation mobility status report
- Conduct preliminary visual assessment of damage of provincially-owned critical highway and bridge infrastructure
- Authorize the closure of provincial transportation routes, including highways and inland ferries
- Coordinate and arrange for transportation operations, engineering and construction resources
- Attend to the safety and protection of provincial highways, including restoration
- When requested by a PREOC, support local authorities to reopen critical routes including access to hospital and airports
- Coordinate exemptions from selected road rules and regulations, if requested by the PECC/PERRC (e.g., driver hours and vehicle weights)
- Provide the public with relevant transportation information
- Analyze and provide heavy-haul routes for logistics transport as required
- Assist the Logistics Section of the PECC/PERRC in the sourcing and procurement of transport assets

## **Other Stakeholders**

### ***BC Safety Authority***

- Provide technical support including inspection and assessment services relating to the technical equipment and systems covered by the Safety Standards Act (e.g., gas, electrical, elevating devices, boiler and pressure vessel technologies)
- Liaise with local authorities that have delegated responsibility for gas and/or electrical under the Safety Standards Act.

### ***Canadian Red Cross Society (CRCS)***

- Provide a liaison officer to the PECC/PERRC to support the Emergency Social Services Branch
- Deploy CRCS ERUs
- Source international ERUs
- Activate the British Columbia Call Centre and Family Reunification function

### ***Fortis BC***

- Provide a liaison officer to the PECC/PERRC and PREOC to support the Critical Infrastructure Branch
- Provide situational understanding of Fortis BC infrastructure including impact assessment, status of outages, anticipated resource challenges and restoration priorities, and
- Liaise with PECC/PERRC to gain access to air reconnaissance flights.

### ***Government of Alberta (GoA)***

- Establish contact with the PECC/PERRC and GOC via Alberta Emergency Management Agency (AEMA)
- Be prepared to assist the GOC in the establishment of the NSA
- Activate Alberta Emergency Response Plan For a Catastrophic Earthquake in B.C.

### ***Integrated Disaster Council of BC (IDCBC)***

- Establish contact with the PECC/PERRC to support the Emergency Social Services Branch
- Assist the PECC/PERRC with procurement of welfare support equipment, supplies and personnel
- Support the implementation of mass care
- Provide consolidated and prioritized lists of personnel, supplies and equipment
- Advise PECC/PERRC of the impacts on vulnerable communities in the impact area

### ***Pacific Northwest Emergency Management Arrangement signatories***

- The International Coordination Group (ICG) coordinates and controls all activations of the PNEMA system
- The ICG will schedule daily or as required conference calls among PNEMA leadership and B.C., catalog a list of resources offered by member signatories and determine the need for PNEMA resource management team (A-Team)
- Upon receipt for a request for assistance, the assisting signatories confirm the availability of the resources being requested and would notify BC that they have the needed resource and have authorization to move forward
- ICG will co-ordinate with other member jurisdictions on behalf B.C. and arrange for mobilization and deployment of a PNEMA resource management team (A-Team) to EMBC's PECC. The A-Team will:
  - Implement PNEMA on behalf of B.C. by coordinating and facilitating the provision of assistance from other member signatories in accordance with the PNEMA Articles and the procedures set forth in the PNEMA Operations Manual and Standard Operating Procedures
  - Assist B.C. with requests for assistance
  - Track the location and status of the assistance accepted and deployed to B.C.
  - Assist the deployed personnel as needed and required while they are deployed
  - Coordinate with Department of Homeland Security/Federal Emergency Management Agency regarding any federal assistance being provided to reduce redundant effort and ensure rapid deployment of needed resources to B.C.

### ***Port Metro Vancouver (PMV)***

- Activate PMV EOC
- Establish contact with Transport Canada, Public Safety Canada and the PREOC to support the Transportation Branch
- PMV Patrol Vessels begin scanning marine channels to ensure navigability
- Activate "Water Watch" with notification to Marine Emergency Response Coordination Committee (MERCC) members
- Provide situational understanding to PREOC via Port cameras and "Water Watch"
- Be prepared to support movement of personnel and equipment around Metro Vancouver via the Marine Highway by MERCC members

### ***Telecommunications Providers (Telus, Rogers, Bell, Shaw, Wind, etc.)***

- Provide a liaison officer to the PECC/PERRC and PREOC to support the Critical Infrastructure Branch
- Provide update on the status of telephone, cellular and other network infrastructure including impact assessment, status of outages, anticipated resource challenges and restoration priorities
- Liaise with PECC/PERRC to gain access to air reconnaissance flights

### ***TransLink***

- Provide a liaison officer to the SWE PREOC to support the Transportation Branch within the Operations Section
- Provide situational understanding of TransLink infrastructure including impact assessment, anticipated resource challenges and restoration priorities

### ***Vancouver Airport Authority (YVR)***

- Address immediate life-safety issues
- Assess operability of: aircraft movement surfaces, dikes, pump houses, bridges, roadways, and structures
- Activate the YVR EOC
- Establish contact with other agencies / stakeholders, and with applicable regional EOCs, including the PECC/PERRC and South West PREOC to support the Transportation Branch within the Operations Section
- Once YVR-specific functions have been assessed and properly resourced, determine if YVR can provide personnel and equipment to augment the provincial response

## **Federal Departments and Agencies**

### ***Aboriginal Affairs and Northern Development Canada (AANDC)***

- Establish contact with the PECC/PERRC
- Support the response and assist with contacting First Nations

### ***Canada Border Services Agency (CBSA)***

- Activation of the Regional Operations Centre (ROC)
- Establish contact with CBSA National Operations Centre and Public Safety Canada Regional Office
- Support external organizations' EOCs and the Federal Coordination Group
- Notify partners and stakeholders regarding operational impacts that may affect other areas or agencies, and establish the required response strategy
- CBSA, in coordination with the US Customs and Border Protection (CBP), will activate the *Joint CBSA/CBP Business Resumption Communication and Coordination Plan* to facilitate timely communication and consultation between CBSA and CBP to assist in the resumption of normal border operations as quickly as possible
- Facilitate potential cross-border movement of personnel and equipment required to support provincial or state entities as per *Procedures for Processing Emergency Support Personnel CBSA - Pacific Region* and the *Government of Canada Plan for the Movement of People and Goods During and Following an Emergency*

- CBSA ROC will liaise and coordinate with the PECC/PERRC regarding the port of entry of capabilities being transported cross-border, destination staging area and other details, as required

#### ***Canadian Coast Guard (CCG)***

- Increase activation level of Regional Operations Centre
- Establish contact with Public Safety Canada and deploy representative to PECC/PERRC
- Alert all CCG ships and stations to put to sea. After all clear signal, provide logistical, humanitarian and infrastructure support as directed
- Provide situational understanding based on area assessments from CCG vessels and stations
- Enhanced monitoring for safety/distress radio calls
- Respond to search and rescue (SAR) distress alerts and coordinate marine SAR planning
- Provide CCG fleet resources to support tasks for special maritime operations, consequence management, security or to clear navigation channels
- Enhance activities to regulate vessel traffic movements and provide specialized surveillance
- Broadcast marine safety information
- Issue Notice to Ships (NOTSHIPS) and Notice to Mariners (NOTMARS)

#### ***Department of Foreign Affairs, Trade and Development (DFATD)***

- Facilitate and coordinate requests for assistance for capabilities sourced internationally, for example through the U.S. in coordination with the U.S. Department of State
- Collaborate with and assist foreign embassies in Canada as/if requested by the country and/or consulate generals of the countries of origin of foreign travelers impacted by the earthquake

#### ***Canadian Armed Forces JOINT TASK FORCE PACIFIC (JTFP)***

- Establish contact and liaison with the PECC/PERRC
- Establish contact and liaison with all PREOCs
- Local units/bases/formations to establish contact and liaison with local authority EOCs
- Report status of Canadian Armed Forces (CAF) in B.C. and response actions
- Within capability, reinforce first responders to provide initial actions to save lives
- Conduct reconnaissance and contribute to JOA situational assessment
- Provide personnel and equipment to augment provincial response
- Provide personnel to augment the PECC/PERRC operations on request
- Commence preparations for receiving CAF reinforcements from outside the JOA
- Commence preparations for receiving US Military reinforcements under the Civil Assistance Plan (CAP)

#### ***Environment Canada***

- Establish contact with the Federal Coordination Centre
- Provide current and long range weather forecasts
- Provide support for marine spills and emergencies

#### ***Government Operations Centre (GOC)***

- Activate the GOC to Level 3
- Establish contact with region and partners
- Initiate the GC Earthquake Response Protocol and GC Contingency Plan for Earthquakes, including the establishment of the National Staging Area

- Identify potential suppliers and/or initiate the acquisition process and deploy critical resources upon request (See Annex I: Critical Resource List)
- Provide assessments of the disposition and status of deployed assets
- Coordinate federal department/agency situational assessment contributions
- Establish contact within regional Federal Coordination Group through the PS Regional Office

***Health Portfolio (Public Health Agency of Canada & Health Canada)***

- Establish contact with the National Health Portfolio Operations Centre for activation
- Liaise with the BC Ministry of Health Emergency Operations Centre
- Liaise with Public Safety Canada Regional Office and participate in regional Federal Coordination Group
- Send liaison to the BC Ministry of Health EOC or the PECC/PERRC

***Industry Canada***

- Liaise with telecommunications service providers to determine the impact on telecommunications in the impact area and to provide situational understanding and critical information to ensure operator safety
- Liaise with Public Safety Canada Regional Office and PECC/PERRC to obtain situational understanding and keep both apprised of the state of telecommunications
- Deploy liaison to the PECC/PERRC to establish or support the Critical Infrastructure Branch to coordinate the telecommunications planning and restoration activities between the telecommunications service providers and the PECC/PERRC
- Assist with cross-border operations coordination if telecommunications service carriers need assets or human resources from the United States

***Natural Resources Canada (NRCan)***

- Establish contact with the PECC/PERRC
- Provide automated notifications of Canadian earthquakes – using data collected by the NRCan-operated national seismograph network – to be distributed to emergency measures organizations, critical infrastructure operators, government agencies, media, and/or the public
- Provide authoritative and objective scientific and technical information regarding earthquakes in Canada in response to information requests

***Public Safety Canada (PS)***

- Establish contact with GOC and deploy representative to PECC/PERRC
- Activate Federal Coordination Centre and coordinate surge capacity requirements
- Establish contact with regional federal emergency management structure and convene Federal Coordination Group to develop a common operating picture
- Plan and coordinate federal resources in support of provincial or federal requirements

***Transport Canada (TC)***

- Establish contact with critical transportation stakeholders, Public Safety Canada regional office, and key government partners to gather information and collaborate as required
- Activate the Regional TC Situation Centre or the Situation Centre alternate site to collate information and coordinate activities
- Report on the impacts to the Canadian transportation system

- Provide subject matter expertise to address transportation issues, as required
- Implement existing authorities, or facilitate voluntary compliance, as required to restrict movement or issue exemptions as required regarding the movement of goods and services
- Maintain TC critical services and address surge capacity needs
- Consider TC assets (aircraft) to support initial response and recovery
- Implement air space and marine traffic controls within the Joint Operations Area (JOA)

## Section 6: Logistics

This section outlines the Logistics Management System (LMS), including critical resources, staging areas, multimodal supply and transportation, key and critical routes, transportation features, and movement priority into and out of the impact areas. During immediate and sustained response, a provincial, multi-organizational LMS will be established to procure, manage and transport response personnel, equipment and supplies.

During the immediate response, the priority is to provide life-saving response teams and supplies to communities in the impact area. To assist local authorities and First Nations within the impact area, the Province will aim to deploy resources to Staging Areas and Community Points of Distribution (CPOD) as quickly and efficiently as is practical.

Resources deemed critical to the response will be controlled by the Province, and, on request, will be allocated to agencies, PREOCs or EOCs permanently or on a temporary basis, within a fixed time limit. As the situation stabilizes, resources may no longer be deemed critical and will be made available as a general resource (See [Annex I: Critical Resource List](#)).

### Staging Areas

Multiple staging areas will be required to facilitate the movement of internal and out-of-province resources to support the impact area. The primary flow of resources into B.C. will be from the east and managed by pre-determined staging areas. A staging area is a movement control point where resources are received, prioritized, and organized prior to deployment. It will be determined based on the scope and scale of the event, and will be established as follows:

- **National Staging Area (NSA)**: Public Safety Canada (PS), will establish and manage the NSA in Alberta. The NSA will manage the movement of resources between national and provincial staging areas.
- **Provincial Staging Areas (PSA)**: PSAs will be managed under the direction of the provincial government and will be established outside the impact area. The PSAs will manage transport to regional and/or local staging areas. Potential locations include:
  - Kamloops – manage the Logistics Management System (LMS) and PSA to manage equipment and commodities
  - Prince George – to manage commodities and support LMS
  - Kelowna and/or Cranbrook – to manage human resources and support LMS
  - Prince Rupert – PSA to manage equipment and commodities received through Port of Prince Rupert and support LMS
- **Regional Staging Areas (RSA)**: The Province will establish RSAs as close to the impact area as possible. RSAs will be managed under the direction of the provincial government and will manage transport to local staging areas. Potential locations include:
  - To support Lower Mainland and Sunshine Coast area:
    - Vancouver Airport (YVR)
    - Abbotsford Airport (YXX)

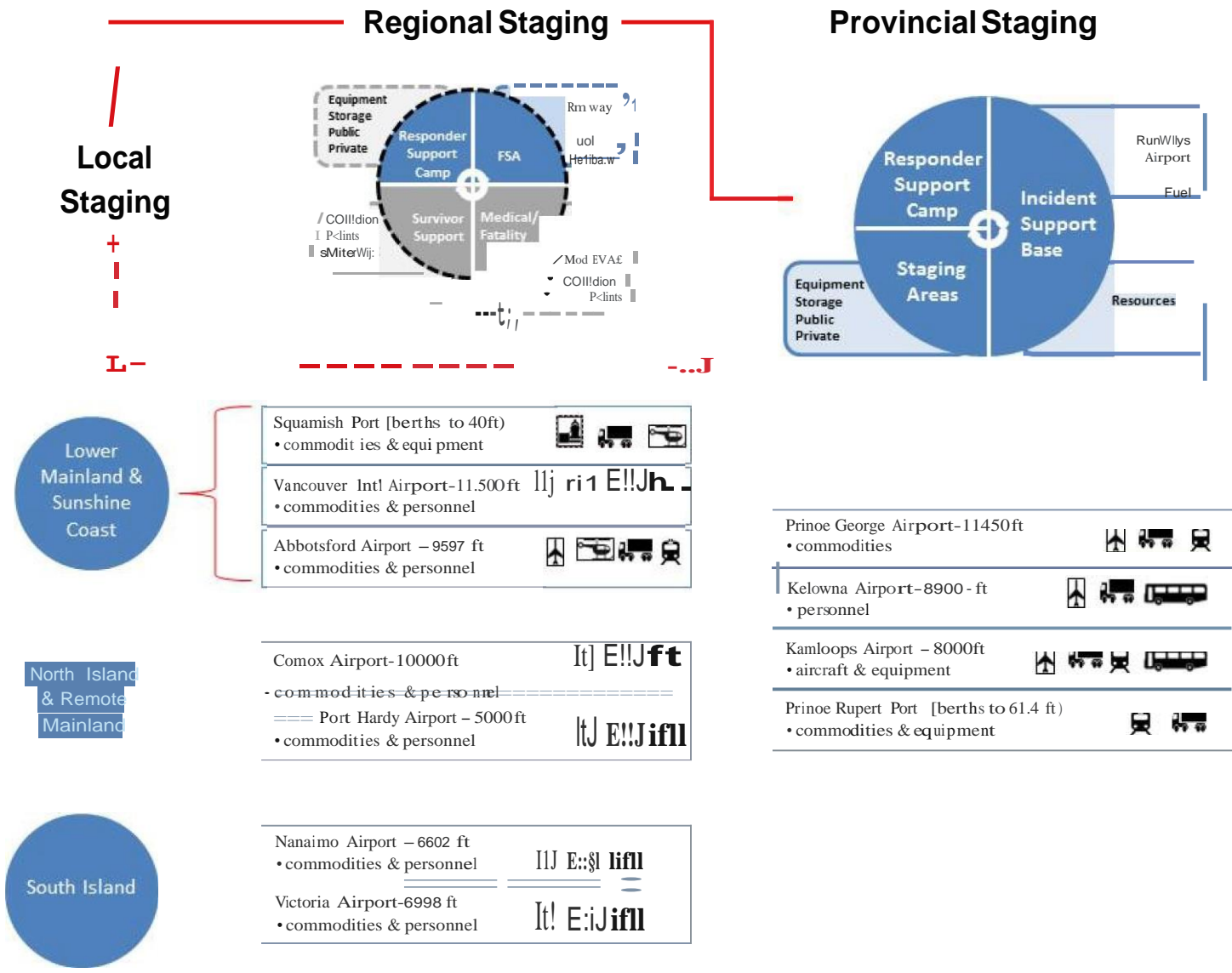
- Port of Squamish
  - To support southern Vancouver Island:
    - Victoria Airport (YYJ)
    - Nanaimo Airport (YCD)
  - To support northern Vancouver Island and remote coastal mainland:
    - Comox Airport (YQQ)
    - Port Hardy Airport (YZT)
- Intermodal transfer points will be identified in cooperation with transportation infrastructure owners and local governments.
- Local staging areas, intermodal transfer points, and CPOD will be a function of local government emergency management plans.

**Figure 8 – Staging Areas and Transport Nodes Map**





Figure 9 – Staging Areas and Resource Flow



## Multimodal Supply and Transportation

Critical transportation routes and features for road, air, marine and rail allow for access to and from staging areas within the Greater Vancouver or Greater Victoria areas. Key transportation routes and features that allow for access to the Greater Vancouver or Greater Victoria areas. Critical transportation routes and features within the impact area will require immediate damage assessment and debris removal to support the provincial LMS (See [Appendix G-1 Critical and Key Transportation Routes and Features](#)).

Disaster Response Routes (DRRs) may or may not coincide with critical routes, may be multimodal and could change due to the circumstances to address the immediate need. DRRs are routes temporarily prioritized for the movement of emergency resources and will be coordinated regionally within the impact area, as required.

### **Road**

Critical routes may include a combination of federal, provincial and municipal roads. Actual conditions post-earthquake may necessitate deviations of the critical routes listed within the impact areas.

Critical local routes are identified by local authorities and are not included in this plan. Refer to local authority plans for critical local routes.

Critical regional routes are vital to the functioning of the regional transportation networks in the impact areas. Critical regional routes:

- Will have priority for initial reconnaissance
- Are the first priority for transportation infrastructure response and restoration
- Require full service ability for all traffic (unlike disaster response routes which can support emergency responder vehicles, but may not be capable of supporting all public traffic)
- Do not vary or change due to circumstances (unlike disaster response routes which are temporary, flexible and adaptable to a particular event for distinct movement of resources)

### **Air**

The PECC/PERRC will determine, in cooperation with local air authorities, priority of effort and where critical air assets will be allocated. The PREOCs will manage the utilization and prioritization of air assets that are designated for regional support. Should sources for provincial assets be exhausted or unavailable, the PECC/PERRC will procure air assets to transport supplies, equipment and personnel to impact areas. National and international support will be limited to airports that have facilities for managing larger aircraft. The primary locations for consideration are:

|                    |                       |
|--------------------|-----------------------|
| • Abbotsford (YXX) | • Comox (YQQ)         |
| • Vancouver (YVR)  | • Nanaimo (YCD)       |
| • Kelowna (YLW)    | • Victoria (YYJ)      |
| • Kamloops (YKA)   | • Prince George (YXS) |
| • Cranbrook (YXC)  |                       |

Regional support will be managed through a central location, and if possible, located at an airport. Local support will be managed primarily through the use of helicopters and small aircraft.

### ***Marine***

The PECC/PERRC will determine, in cooperation with local marine authorities, priority of effort and where critical marine assets will be allocated. The PREOCs will manage the utilization and prioritization of marine assets that are designated for regional support. Should sources for provincial assets be exhausted or unavailable, the PECC/PERRC will procure ships to transport heavy freight, supplies, equipment and personnel into impact areas.

As the largest port in Canada, it is important that PMV resumes regular operations as quickly as possible; however, PMV is a critical logistical node and will support provincial immediate response efforts. During immediate response, some of PMV's operational focus may be reprioritized for receiving and delivering humanitarian supplies.

BC Ferries is a critical component of the provincial logistics system by connecting the mainland to the islands. Terminals, infrastructure, personnel and marine assets will be utilized to facilitate the transport of supplies, equipment and personnel.

### ***Rail***

During the immediate response phase, it is expected that rail lines will be compromised and impassable; however, to the extent possible, rail will be engaged to provide transportation of commodities, including fuel and heavy equipment.

Two national railways, Canadian National (CN) and Canadian Pacific (CP), have lines into the Lower Mainland. CN Rail also maintains a line from Vancouver north to Prince George. Burlington Northern Railway (BNR) maintains a spur line that crosses the Canada-U.S. border at Sumas, approximately five kilometers east of the Abbotsford airport and the main line that runs along the coast from Seattle to Vancouver that crosses the Canada-U.S. border at the Peace Arch. TransLink maintains a light commuter rail service within the Greater Vancouver area.

Figure 10-Greater Victoria Area Transportation Features Map

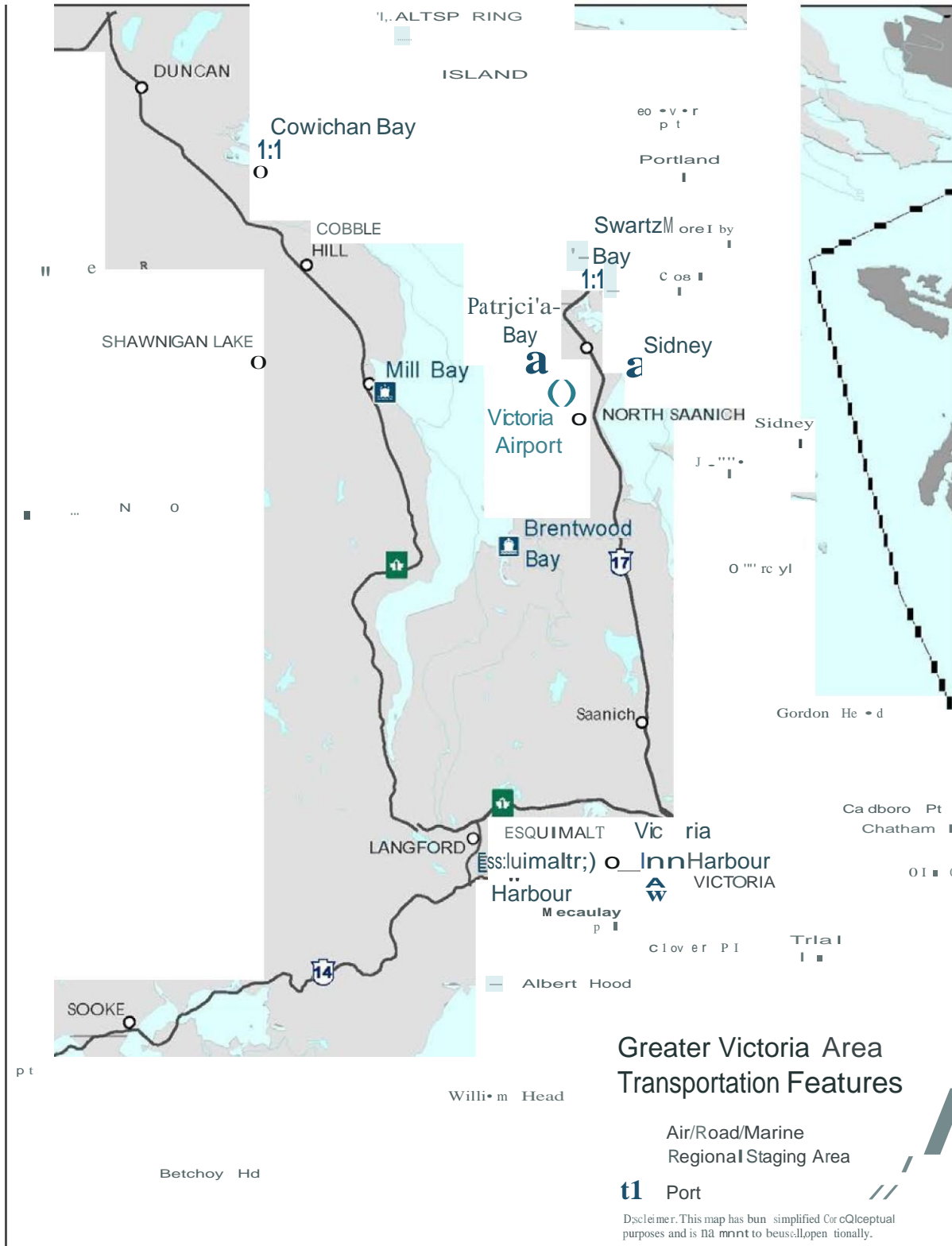
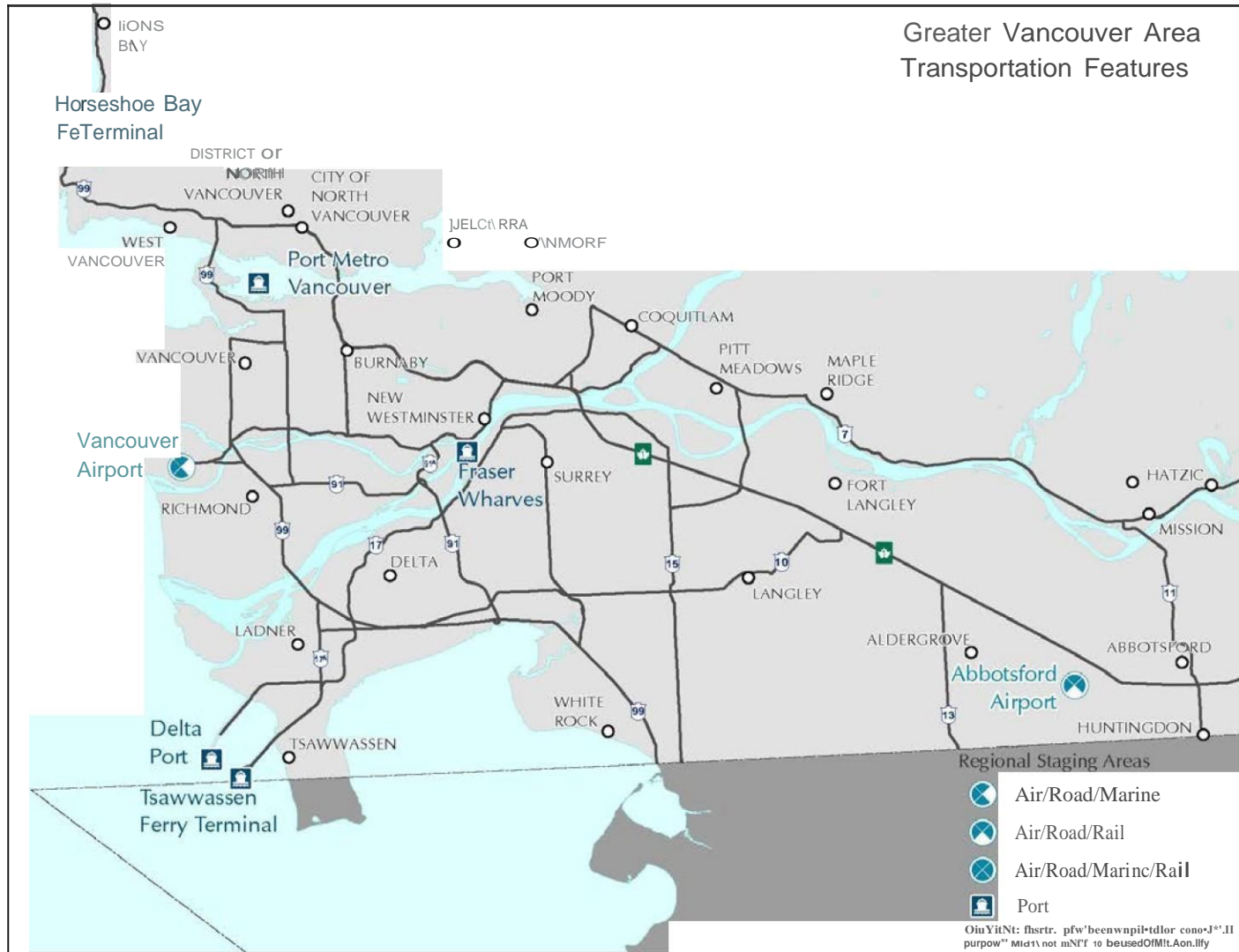


Figure 11 - Greater Vancouver Area Transportation Features Map



## **Movement Priority**

To maximize the use of limited transport assets, the following priority list is to be used as guidance for transport into and out of the impact areas during the immediate response phase.

### ***Transport into impact area in priority order***

1. Medical personnel, supplies and equipment
2. Search and rescue personnel
3. Emergency Social Services supplies (water, food, shelter)
4. Surge capacity of response personnel (to coordinate the regional and local response)
5. Fire-fighting supplies, equipment and personnel
6. Infrastructure assessment and repair resources
7. All other requests

### ***Transport out of the impact area in priority order***

1. Patients/Casualties with immediate life-threatening injuries
  - IMMEDIATE – Immediate life, limb or organ-saving intervention; resuscitation simultaneous with intervention
  - Decision to transport normally within minutes
2. Patients/Casualties with potential life-threatening injuries
  - URGENT – Intervention for acute onset or clinical deterioration of potentially life-threatening conditions, for those conditions that may threaten the survival of limbs or organs, for fixation of many fractures and for pain relief or other distressing symptoms
  - Decision to transport normally within hours
3. Personnel critical to functioning of government and management of response
4. Non-residents, both domestic and international
5. All other requests

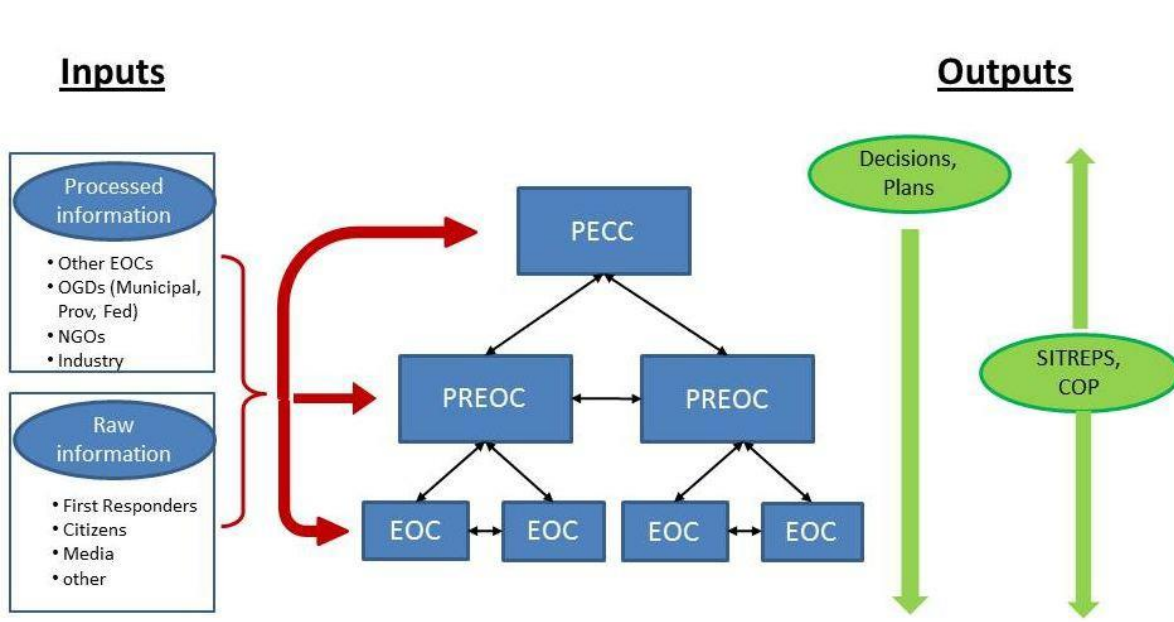
## Section 7: Situational Understanding

Situational understanding is the ability to identify, comprehend, analyze and process priority information about the event and its impacts. Sustained knowledge of conditions, potential impacts on infrastructure and populations, and current and future response actions will guide the direction and effectiveness of response. This will require all response partners and local, provincial and federal EOCs to provide impact assessments – information sufficient to adequately inform the decision-making process. This includes reporting and assessing impacts, response actions, and communicating requirements aimed at meeting immediate response objectives. Information will also be integrated from first responders, the public and the media.

To support integrated response efforts, the PECC/PERRC has Critical Information Requirements (CIRs). CIRs assist the development of a common operating picture to facilitate coordinated decision making (see [Annex G: Critical Information Requirements](#)). CIRs define the type of information required and potential sources. While the PECC/PERRC is the primary user of the CIRs, all response organizations should refer to the CIRs to understand the information they will be required to provide.

To assist in the analysis of information and to communicate regional impacts and needs, local authorities and First Nations, PREOCs, provincial ministries, critical infrastructure owners and other stakeholders are provided an impact assessment template: see [Annex J: Impact Assessment Template](#).

Flow of information will follow normal reporting channels with EOCs, agencies and critical infrastructure owners providing consolidated situation reports and impact assessments to appropriate level of authority within the provincial emergency management structure.



## Section 8: Critical Infrastructure

Critical infrastructure (CI) refers to processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government. CI can be stand-alone or interconnected and interdependent within and across provinces, territories and national borders. Disruptions of CI could result in catastrophic loss of life, adverse economic effects and significant harm to public confidence; therefore, damage assessment and status of essential CI is required.

The following represents the 10 CI sectors recognized in B.C.:

- Energy and Utilities (natural gas, hydro, transmission systems, oil, fuel)
- Finance (financial Institutions, banking, securities, investment)
- Food (producers, processors, wholesalers, distributors)
- Government (local, regional, provincial & federal services, facilities, assets)
- Health (health authorities, hospitals, health care providers, laboratories, pharmaceuticals)
- Information and Communications Technology (telecommunications, broadcasting, software/hardware/networks, amateur radio)
- Manufacturing (supply chain, including suppliers & vendors; industry)
- Safety (police, fire, ambulance, specialized services [HUSAR; Chemical, Biological, Radiological, Nuclear, Explosive])
- Transportation (air, marine, road, rail)
- Water (dams, reservoirs, wastewater/sewage, distribution)

During the immediate response, not all CI will be essential. Decision-makers will be provided with situations that will require their guidance on priority restoration to services and facilities deemed essential to supporting response activities. Consideration will be given to CI interdependencies, sustainability and setting the conditions for successful transition to sustained response. Restoration of CI that supports life-saving and life-sustaining activities will initially have priority effort. Many elements of each CI sector listed above have critical functions to support these activities. As time permits and resources are made available, restoration of non-critical services and facilities within each CI sector will be addressed. These CI restoration activities will be prioritized during the sustained response and recovery phases.

The decision support table below is designed to assist in the analysis of critical information required to support operational, tactical and strategic decision makers.



**Table 1 - Critical Infrastructure Information Requirements**

| <b>Key Indicators</b>   | <b>Priority Decision Making Criteria</b>                                                                                                                                                        |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Population              | # of individuals/communities impacted if CI asset disrupted/lost                                                                                                                                |
| CI Stakeholders         | # of CI stakeholders involved with infrastructure at risk                                                                                                                                       |
| Resource Needs          | Asset requirements needed to support emergency operations and/or available for back-up service (e.g. power to support water suppression pumps)                                                  |
| Interdependencies       | What other services/personnel/resources/communities/emergency organizations could be impacted if infrastructure is disrupted, damaged, lost or at risk? Who are key CI stakeholders relying on? |
| Outages/Outage duration | Before back-up services can be established (outages/expected outage duration)                                                                                                                   |
| Assets at Risk          | Significance of assets at risk (e.g. hydro - transmission lines; telecommunications - cell towers; generators; CI stakeholder access to sites, etc.)                                            |
| Other                   | Key information through briefings, conference calls, phone calls, and internal databases that indicate urgency                                                                                  |

***Immediate Response Actions for Critical Infrastructure Owners***

All CI owners, asset holders and supporting agencies are to:

- Identify mission critical systems
- Conduct assessments to identify current and future impacts and potential public safety concerns
- Analyze consequences
- Mitigate immediate hazardous situations
- Commence restoration activities
- Establish contact with a PREOC
  - Primary point of contact – within region
  - Secondary point of contact – adjoining region
  - Alternate – AEMA or PS
- Consolidate personnel and equipment required to safely conduct prolonged activation
- Continue to reassess all activities for effectiveness until transition to sustained response phase

***Critical Infrastructure Coordination***

CI coordination includes situational understanding, communication of current hazard information, and monitoring of risks to all 10 CI sectors. It also coordinates priority mitigation and restoration efforts to support critical assets and services.

Overall, provincial CI coordination will be conducted at the PECC/PERRC with CI Branches established at both the PECC/PERRC and PREOC(s). As needed, specific CI Units based on the 10 CI sectors may be established to maintain span of control according to the scope and scale of the event. CI owners will report impact assessments to the appropriate PREOC and/or the PECC/PERRC.

During a disaster, local and provincial government resources will be overwhelmed. In such an event, one's family and neighbours are likely to be the only available first responders. While British Columbians should be prepared for a minimum of 72 hours, during a catastrophic event people should expect to be self-sufficient for five to seven days. Prepared families and individuals will reduce pressure on overwhelmed government agencies and allow available resources to go where they are most needed.

## Section 9: Emergency Social Services and Mass Care

A whole of community response, with neighbour helping neighbour, will prove critical in the first days following an event. Local authority Emergency Social Services (ESS) systems must activate quickly, to the best of their ability, to begin providing services. It is acknowledged that it will not be immediately possible to provide the full range of services required for mass care; however, in order to meet the most urgent needs friends, families, communities, and local ESS responders must move into action and maximize existing resources.

People impacted by the event and unable to support themselves will likely congregate at local public facilities seeking assistance – placing pressure on local governments to respond. Many will be able to shelter in place in their homes, yet still require life-sustaining resources such as food, water, sanitation and basic medical aid.

Capability and plans to provide life-sustaining services immediately following disasters is a responsibility of all levels of government. Under the *Local Authority Emergency Management Regulation*, a local authority is required to plan for how it will coordinate the provision of food, clothing, shelter, transportation and medical services to people affected by emergencies and disasters.

In B.C., most ESS activations are for small-scale Level 1 and 2 events. As such, the practice in B.C. for the provision of ESS immediately following a disaster relies primarily on local ESS teams assisting affected individuals, potentially augmented by nearby ESS teams. In a catastrophic earthquake, individual service delivery will not manage the volume of need; therefore, ESS Level 3 must be activated to support mass care and provision of basic needs to a mass population, including bulk distribution of essential supplies and a variety of sheltering scenarios (e.g. group lodging, shelter-in-place, unofficial lodging sites).

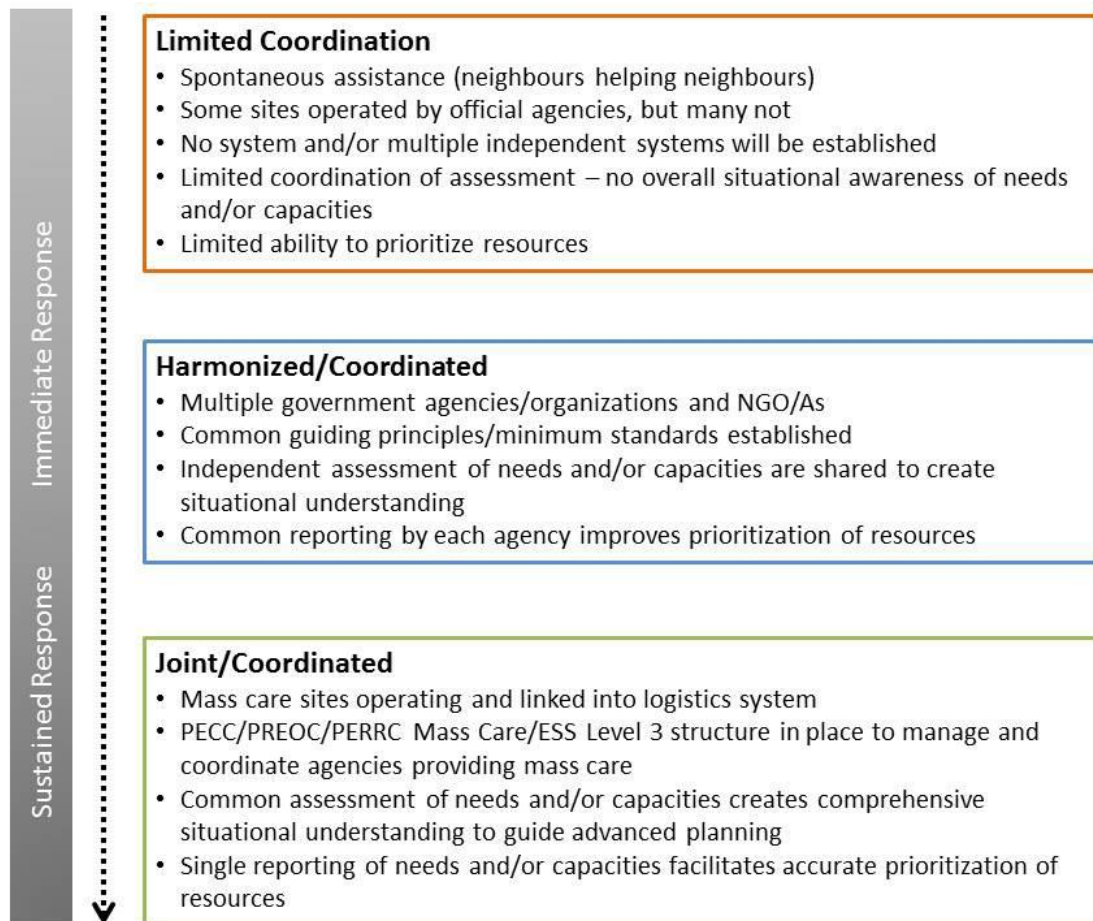
Level 3 ESS is defined as a:

Major emergency that exceeds a local authority's capacity to respond and requires assistance from neighbouring jurisdictions. Requests for assistance may extend to the Province, the Government of Canada, and national and international organizations to provide emergency social services and mass care for a large population.

### ESS Level 3 Coordination/Mass Care

The coordination of ESS Level 3/mass care will evolve from limited coordination to integrated as the response progresses. By the sustained response phase, the Province will assume a lead role coordinating the provision of ESS Level 3. Towards the end of immediate response, ESS Level 3/mass care sites should be established and linked into logistics system. In addition Government structure in place to manage and coordinate all agencies providing mass care. Figure 12 illustrates how coordination evolves from the immediate to sustained response phases.

Figure 12 – Coordination of Mass Care During Response



The process of ESS Level 3/mass care assistance begins with neighbours helping neighbours, thus assistance will be spontaneous, ad-hoc and reliant on resources available in the community at the time of the event. As a result, initial assistance will not be coordinated or managed solely by official agencies. Limited coordination mechanisms will be in place and multiple systems will be established, hampering the ability to assess capacities and needs in order to obtain clear situational understanding and prioritization of resources.

As local governments mobilize services through normal means, multiple government and local IGO/NGO agencies will converge to help. Harmonization of services will begin to occur through the establishment and adoption by all agencies of common guiding principles and minimum standards of care in accordance with the Humanitarian Charter and Minimum Standards in Humanitarian Response<sup>7</sup>.

A provincial ESS Level 3/Mass Care Coordinator will be established at the PECC/PERRC and PREOC to coordinate ESS Level 3/mass care services. Local authorities should also create a position within their EOCs that serves a parallel function. Adjoined to the ESS Level 3/Mass Care Coordinator would be the option for an integrated Mass Care Task Force comprised of key IGOs, NGOs, local authorities and First Nations, and stakeholders.

With local authority and First Nations impact assessments that define needs and capacity gaps provided to the PREOC, coordination and provision of resources can be prioritized. The PECC/PERRC and PREOC will liaise with NGOs, provincial, national and international partners to address capacity and resource needs and integrated response efforts will coordinate the following, non-exhaustive list:

- Critical resources, as outlined in [Annex I: Critical Resource List](#)
- Basic medical aid
- Family reunification
- Psycho-social services
- Information services

Local, regional, provincial, national and international aid agencies will offer assistance and provide surge capacity to ESS Level 3 response. National and international offers of assistance will be made to the Province and/or Government of Canada and will be coordinated by the PECC/PERRC and the GOC. The Government of Canada, through the GOC, will make necessary requests for international humanitarian response assistance to address capacity needs, such as through the United Nations Office for the Co-ordination of Humanitarian Affairs in Geneva (UN OCHA.)

Through the PECC and PREOCs, the Province will:

- Coordinate the movement of resources from provincial and regional staging areas to CPOD identified by the local authority
- Coordinate consolidated resource requests to regional, provincial and national levels
- Prioritize critical, life-sustaining resources
- Coordinate Requests for Federal Assistance to augment capacity gaps in the delivery of Mass Care services
- Coordinate the deployment of national and international aid
- Coordinate sharing of information and facilitating mutual aid with regional human services response resources among communities

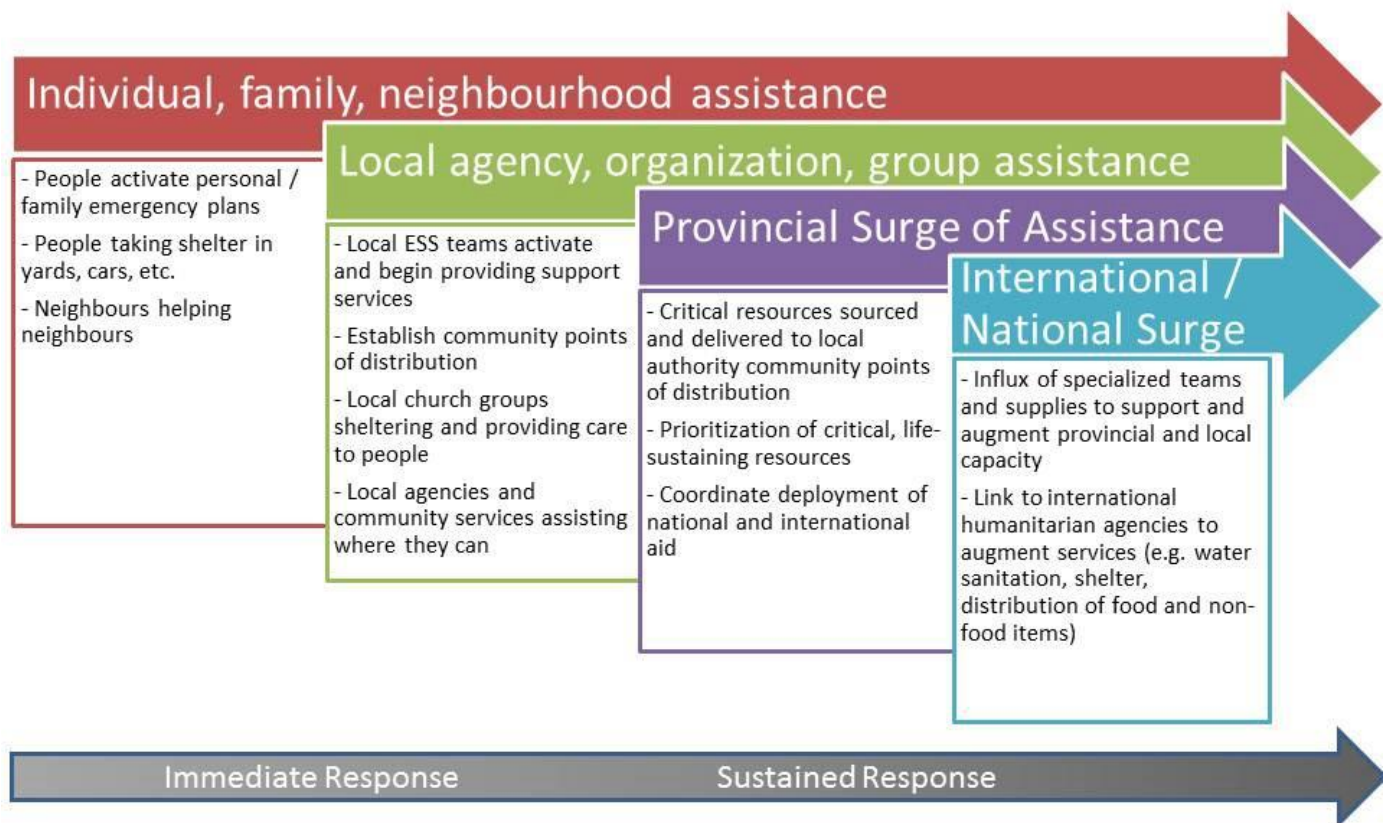
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<sup>7</sup> <http://www.sphereproject.org/handbook/>

- Coordinate human services support with other agencies, such as the Integrated Disaster Council of BC, and functions within the PECC/PERRC (e.g., logistics, public information) and from regionally-located support organizations

Figure 13 illustrates how support builds from individual responsibilities to national and international assistance. These activities are progressive and complimentary.

**Figure 13 – Emergency Social Services / Mass Care Support**



## Section 10: Volunteer Coordination

B.C. has a wealth of affiliated volunteers - individuals who have completed prerequisites to be officially recognized by and have registered with a recognized agency or organization – who offer their services without expectation of financial compensation and are a critical component of emergency response. These volunteers are registered, screened and trained in emergency response operations and community support.

Convergent volunteers are those who spontaneously offer their help during a disaster and are not registered or affiliated with traditional or recognized nongovernmental volunteer organizations. Following a catastrophic disaster, many people within the impact zone will want to contribute to the response and recovery efforts. Some will be trained professionals, others will simply citizens willing to help; they will make a significant contribution to the efforts of agencies prepared to use them.<sup>8</sup> While they are a valuable resource, if not coordinated, convergent and emergent volunteers can also challenge response efforts by impacting transportation routes, distracting first responders concerned about volunteer safety, and creating accountability, logistical and administrative issues.

Local governments will make the most of convergent volunteers through advanced planning with organizations, agencies and jurisdictions regarding:

- volunteer coordination
- abbreviated intake and referral processes
- public messaging

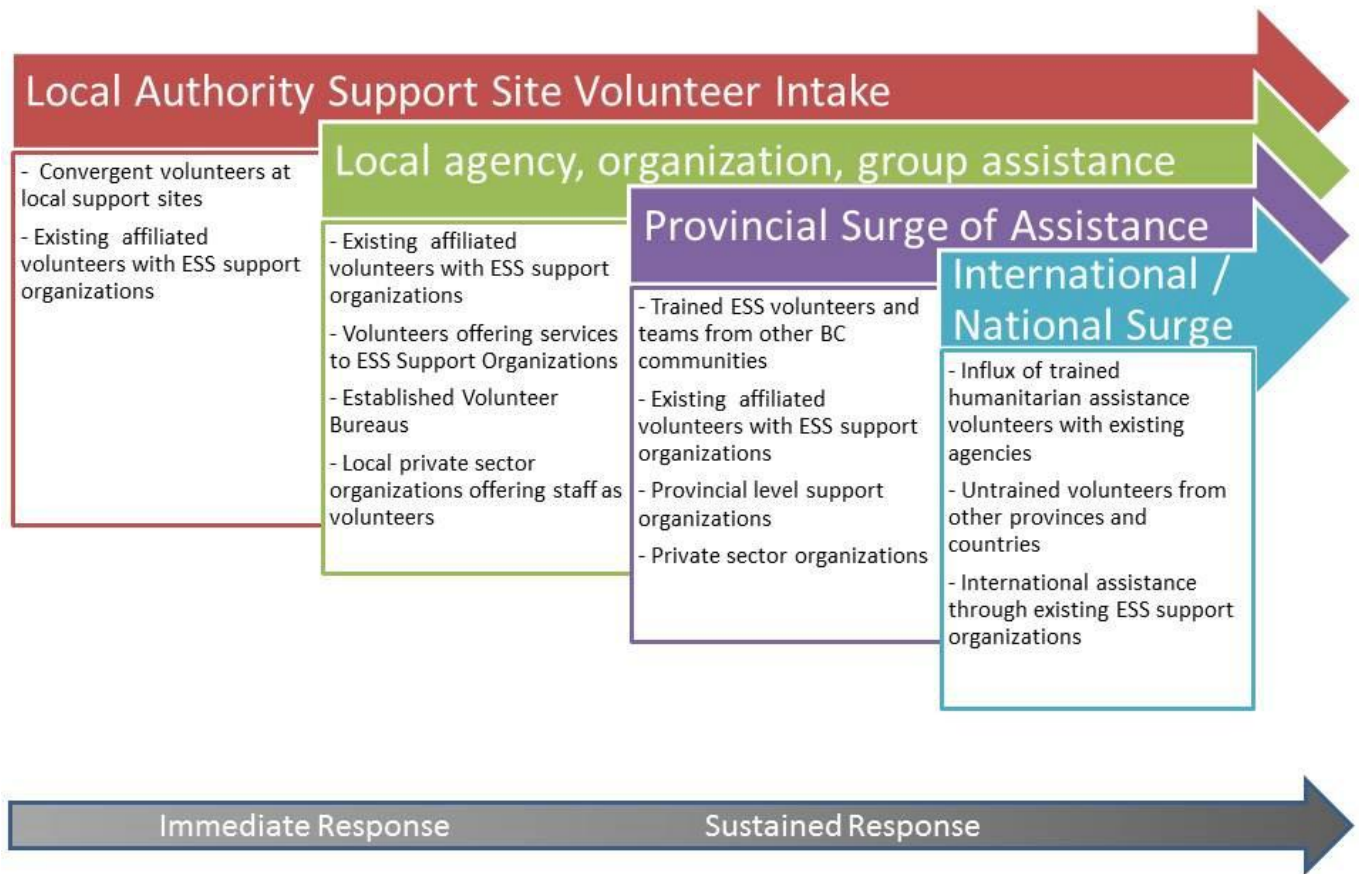
Citizens volunteering within their own impacted communities will receive coordination from their local authority and local branches of intergovernmental, non-governmental and volunteer agencies. The Province, local authorities and nongovernmental organizations, and volunteer agencies, will facilitate the efficient use of volunteer resources through collection, coordination, and sharing of information regarding volunteer resource needs and capacities.

Figure 14 depicts volunteers at each level from site to national and the support effort as progressive, with augmentation of volunteers and support provided at each level.

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<sup>8</sup> "They Will Come: Post-Disaster Volunteers and Local Governments" (2001), California Emergency Management Agency

Figure 14 – Volunteer Support



**Public Messaging**

Immediately following a disaster, public messaging encouraging those within the impacted area to assist family, friends, and neighbours is essential. Self-deployment of unaffiliated volunteers from outside the impact area should be discouraged through the use of public messaging by all levels of government, agencies and organizations. Public messaging for volunteers should direct them to register with an established support organization or with local authorities as a convergent volunteer.

**Volunteer Coordination**

To support local authorities, the Province will augment volunteers from support organizations to assist with response efforts; however, local authorities will need to coordinate volunteers at the local level. Local authorities will request surge capacity through the PREOC and the PREOC and PECC/PERRC will source personnel regionally, provincially, nationally and internationally, as required. Action plans at the PECC/PERRC and PREOC will be developed to assist in the coordination and management of volunteer convergence, including intake and referral processes.

Requested volunteers arriving from outside the impact area will be staged at a Provincial or Regional Staging Area to alleviate logistical burdens on impacted jurisdictions. The Province will coordinate the deployment of volunteers to the impact area. Once deployed to the impact area, the local authorities or requesting agency is responsible for the volunteers. However, should local authorities or agencies lack resources to sustain volunteers (food, lodging, etc.), these resource gaps must be identified and additional resource request must be made to support these needs.

### ***International Offers of Assistance***

International offers of assistance from volunteer and support organizations made to the Province and the Government of Canada and will be coordinated by the PECC/PERRC and the Government Operations Centre.

### ***Volunteer Management***

For local, converging and emerging volunteers, local authorities and volunteer organizations are responsible for:

- Screening/intake
- Registration
- Orientation
- Training and supervision
- Credential verification and liability
- Distribution of tools, personal protective equipment
- Documentation of hours worked and evaluation

It is unlikely during the immediate response phase that unaffiliated volunteers will be thoroughly screened and complete criminal record checks conducted. Unscreened volunteers should not be assigned roles that have direct and/or solitary contact with children, dependant adults or other vulnerable populations.

In order to minimize risk and protect people and property, local authorities, agencies and organizations engaging non-affiliated convergent volunteers should employ risk management strategies such as pairing situations where unaffiliated volunteers are placed in teams with an affiliated, trained volunteer as the team leader.



## **Section 11: Strategic Communications**

The primary purpose of strategic communications is to deliver accurate, clear, concise and timely information during situations where the health, safety, security and property of British Columbians may be compromised. Ensuring a simple, straightforward and consistent approach to compiling, verifying and disseminating information that everyone can rely on is essential. Due to degraded communication, effective dissemination of information will be impacted; however, every effort will be made to ensure stakeholders and the public receive timely and critical information.

Audiences of strategic communications include:

- Citizens directly impacted by the event
- General public
- Local, national and international media
- All levels of government
- Responding agencies
- Response and recovery stakeholders

Within the provincial emergency management system, Government Communications and Public Engagement (GCPE) is responsible for providing provincial government communications services. GCPE's Deputy Minister is a member of the CCG advising on all strategic communications issues and providing a link to the Premier's Office. Depending on the scope and scale of the event or the inherent issues involved, GCPE will also staff and manage PECC/PERRC and PREOC Information Units with Information Officers (IOs). As required, GCPE will assist local authorities with strategic and public communications or provide a liaison to the local authority EOC to ensure the Province receives accurate and timely information from the local level.

During the immediate response phase, GCPE-EMBC communication staff will serve as a vehicle for information to be shared to the Ministry of Justice GCPE Communications Director (CD) who will redistribute information to colleagues in all relevant ministry GCPE departments and GCPE headquarters to ensure an efficient and coordinated flow of cross-government information.

### **Joint Information Centre (JIC)**

During the immediate response phase the Information Branch will activate as usual within the PECC/PERRC; however, depending on the scale of the event and coordination required, a JIC may be required and established to ensure an efficient and coordinated flow of information. The JIC will be led by GCPE and co-located with the PERRC.

The JIC will include information officers from GCPE and other key response agencies at the local, regional and national levels. Stakeholders such as CI owners, media and IGO/NGO agencies will also be present in the JIC to ensure coordinated messaging to the general public.

## **Activation of Strategic Communications**

The CD will request the GCPE ADM deploy a Quick Response Team to the PECC/PERRC Information Branch that will be led and managed onsite by EMBC-GCPE communications staff (Manager and/or Senior Public Affairs Officer). Deployment of the Quick Response Team is dependent on availability and direct ministry response implications and will be comprised of operational teams that consist of the following functional roles:

- Issues management and media relations
- Public information
- Communication stakeholder relations

## **Roles and Responsibilities**

### ***Quick Response Team***

Under the direction of the GCPE-EMBC Communications Manager the Quick Response Team will conduct the following key actions:

- Send out pre-scripted BC Earthquake Immediate Response Plan media / public information safety and security messages (See Annex K)
- Set up the Information Branch in the PECC/PERRC
- Ensure the provincial call centre, managed by the Canadian Red Cross, is receiving accurate and timely information to share with the public
- Assess the current state of media relations
- Establish communication with key EOCs including those of local, regional, provincial, national and key stakeholders
- Establish and verify all media and public information distribution lists
- Advise Premier's Office on the timing of public addresses and tours of impact areas
- Identify and correct any impediments to the accurate, complete, timely and consistent flow of information

### ***GCPE-EMBC Communications staff (Manager and/or Senior PAO)***

- Provide awareness of activities and issues to the CD
- Direct the duties/tasks of the Quick Response Team and provide direct advice and oversight
- Oversee information flow coming out of the PECC/PERRC and ensure it's wide-spread dissemination
- Advise on staffing requirements
- Identify and correct any impediments to the accurate, complete, timely and consistent flow of information

### ***Issues Management and Media Relations Unit***

- Direct GCPE's media monitoring group on parameters and scope of media scans and monitor news sites and social media channels outside Today's News Online (TNO) scanning capacity
- Collaborate with the Stakeholder Relations unit on intel that helps to predict and manage potential issues, formulating messaging and issues notes as required

- Provide a centralized mechanism for media inquiries: set up interviews, craft responses and key messages, shepherd documents through approvals, and reply to reporters with statements, background or helping coordinate spokespeople for interviews
- Assemble the required logistics, including spokespeople and conference call lines, to facilitate and manage scheduled media conferences and media conference calls

***Public Information Unit***

- Establish and verify all media and public information distribution lists
- Send out pre-scripted IRP public information messages and craft/coordinate the dissemination of additional information bulletins, news releases and fact sheets to media
- Disseminate communication materials to the Stakeholder Liaison
- Coordinate with the Stakeholder Liaison Unit to share public information

***EMBC Social Media Unit***

The EMBC Social Media unit will act as a primary source for public emergency information during the Immediate Response Phase with the support of the GCPE digital communications unit. The EMBC Social Media Unit will provide timely information to the public and assist in information gathering within the Joint Information Centre supporting the PECC/PERRC. EMBC Social Media Unit roles include:

- Provide timely, accurate messaging catered to each audience (through the use of hashtags, locations)
- Liaise with GCPE to support safety and security messages
- Gather information and provide operational support to the PECC/PERRC
- Liaise with stakeholders, including GCPE digital communications unit and CANVOSS, to research and report on conversations online
- Monitor online stakeholders and media
- Mitigate and correct inaccuracies posted online

***Stakeholder Relations Unit***

- Establish communication with key EOCs to ensure proper communication channels
- Engage key stakeholder groups in the information sharing process
- Disseminate messaging and communication materials as appropriate with key internal and external stakeholders:

*Internal:*

- Cross-ministry GCPE Communication Directors and Managers
- Relevant crown corporation Communication Directors
- Social Media Unit and EMBC staff

*External:*

- IGO/NGOs, such as Canadian Red Cross and Salvation Army
- Appropriate local government communication managers

## Methods for Gathering and Disseminating Information

### ***Media Conferences & Technical Briefings***

- Senior spokespersons of key agencies in attendance
- GCPE media relations officer moderates
- Scheduled at least once a day during immediate response phase
- Provides updates from previous briefing
- Conference line open for media not in attendance

### ***Public Meetings***

- Informs the public about the emergency
- Representatives from lead agencies and local politicians update public and answer questions
- Typically held in a local community centre or church

### ***Information Bulletins***

- Disseminates written information to the media and general public
- Frequent factual updates disseminated as new information received

### ***Media Releases***

- Updates information with additional context, background, news angles and quotes

### ***Media Advisories***

- Notifies media of upcoming media briefings, public meetings, VIP tours, etc.
- First advisory notifies media that the Information Branch has been established and contains contact information
- Contains the basic information of who, what, when, where and why of an event of interest to the media and the public

### ***Social Media***

- Disseminates written information from various levels of government to the media and general public via online channels
- Frequent factual updates disseminated as new information received

### ***VIP Tours***

- Helps plan and manage ministerial site visits, speaking and photo opportunities
- Provides site-level media relations

### ***Strategic and Public Messages***

Public messages that are to be used by provincial agencies are listed in [Annex K: Strategic and Public Messages](#). Local authorities will need to adapt these messages to suit their needs.

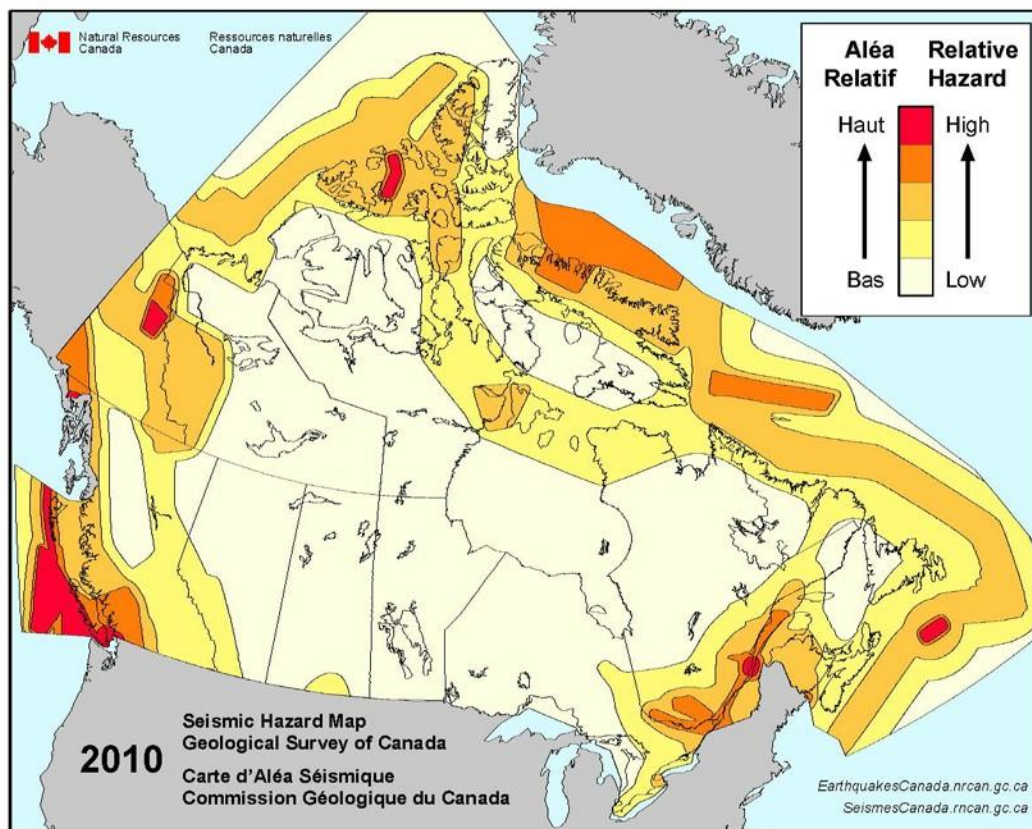
## Annexes

### Annex A: Earthquake Hazard in B.C.

#### General

The threat of a catastrophic earthquake in British Columbia is real. On average, over 2,500 earthquakes occur in the province every year with the Pacific coast identified as the most earthquake-prone region of Canada.

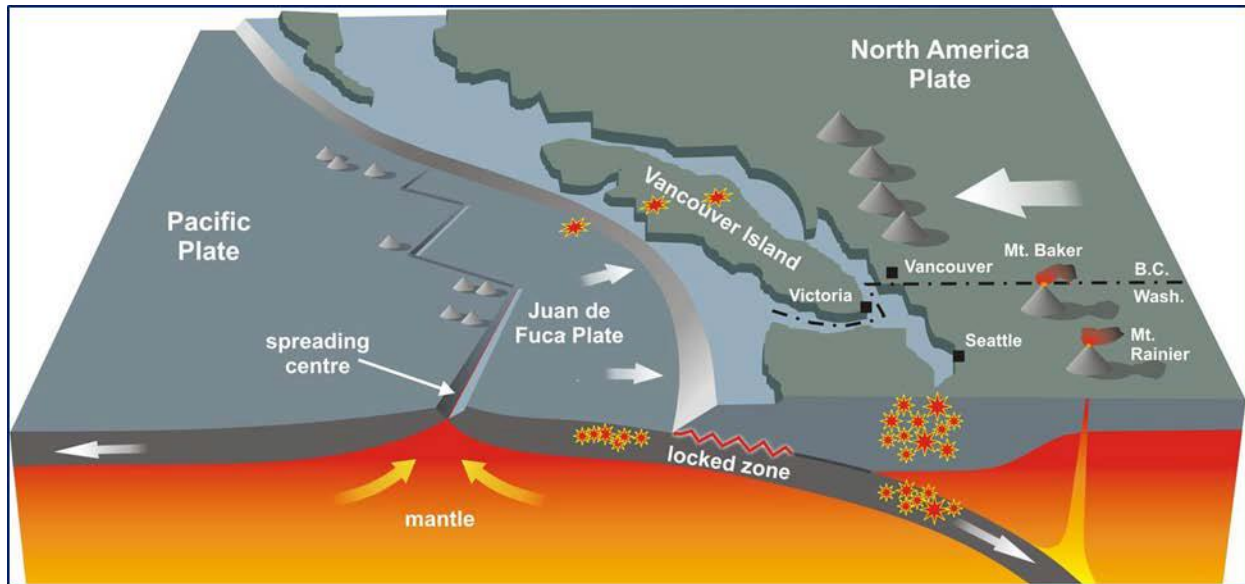
Figure 55 – 2010 Seismic Hazard Map, Geological Survey of Canada



This significant seismic activity is due to B.C. being one of the few areas of the world where three types of plate boundaries exist (see Figure 2):

- Shallow earthquakes in the North America plate (e.g. 1946 M7.3 near Courtenay)
- Deep earthquakes in the subducting oceanic plate (e.g. 2001 M6.8 Nisqually earthquake near Olympia Washington that was felt in Victoria and the lower mainland)
- Large subduction zone earthquakes that occur between the interface of the Juan de Fuca plate and North American plate. (e.g. 1700 M9 in Cascadia earthquake).

Figure 66 – British Columbia Region, Cross Section



### ***Cascadia Subduction Zone***

The Cascadia subduction zone (CSZ) is a fault approximately 1,100 km long that parallels the coastline of western North America from the northern tip of Vancouver Island to northern California. This fault contains a currently locked segment which lies beneath the continental shelf and extends to the west coast of Vancouver Island. Great earthquakes have occurred along this subduction zone in the past between 200 and 1,000 years apart, the last of which was a Magnitude 9 in 1700. Seismologists have determined there is a high probability a Cascadia event will occur within the next 200 years.

Although impacts to our coast differ significantly to the U.S. coast that is highly populated with dense critical infrastructure, a CSZ event would prove devastating to B.C., and elements of this plan can be tailored to support a response focused on Vancouver Island, including the impacts from a tsunami.

### ***Most Dangerous Earthquake Threat***

Statistically, shallow earthquakes in the North American plate are smaller than a CSZ earthquake, reaching magnitudes of 6 to 7.5, but occur more frequently than the great, offshore subduction zone events. The most dangerous earthquake threat with the greatest impact to B.C. is from a major, shallow earthquake near the urban centres of Greater Vancouver or Greater Victoria due to population density, the location of government, economic significance, and CI interdependencies.

## Annex B: Provincial Declaration State of Emergency

### Appendix B-1: Provincial Declaration State of Emergency Matrix

Based on the *Emergency Program Act*, the table below identifies the powers available to the Minister of Justice or delegated to the Assistant Deputy Minister (ADM) of EMBC, in a declared State of Emergency with examples of possible actions that may be taken during a catastrophic earthquake. Powers (d) to (l) can also be used by local authorities in a State of Local Emergency.

| Emergency Power                                                                                                                                                                                                                            | Effect / Action                                                                                                                                                                                                                                                                                                                                                                         | Considerations                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (a) Implement a provincial emergency plan or any provincial emergency measures                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Activation of the Immediate Response Plan</li> <li>• Activation of Comprehensive Emergency Management Plan</li> <li>• Activation of Mass Fatality Plan</li> <li>• Supports EPA Section 7- the implementation of provincial plans</li> <li>• Activation of Integrated Partnerships for Emergency Management (IPREM) Regional Con Ops</li> </ul> | <ul style="list-style-type: none"> <li>• Personnel or capacity available to activate relevant plans</li> <li>• Economic impacts due to the implementation of emergency measures</li> </ul> |
| (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                                                  | <ul style="list-style-type: none"> <li>• Empowers local authorities to implement their earthquake or emergency response plans</li> </ul>                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Personnel, experience or capacity available to activate relevant plan or emergency measures</li> </ul>                                            |
| (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 | <ul style="list-style-type: none"> <li>• Minister to issue Order to head of the local authority to implement local earthquake or emergency response plans.</li> </ul>                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Capacity of local authority to implement plan as directed</li> <li>• <i>NOTE: Minister cannot delegate this power to ADM of EMBC</i></li> </ul>   |
| (d) Acquire or use any land or personal property considered necessary to prevent, respond to or alleviate the effects of an emergency or disaster                                                                                          | <p>For example, but not limited to:</p> <ul style="list-style-type: none"> <li>• Building temporary public works</li> <li>• Provincial and Regional Staging Areas</li> <li>• Red Cross Emergency Response Units (ERUs) sites (e.g.: health, water, sanitation, etc.)</li> <li>• Temporary morgues</li> <li>• Mass shelter sites (i.e.: tent city, recreation centres, etc.)</li> </ul>  | <ul style="list-style-type: none"> <li>• Compensation for use</li> <li>• Community impacts and safety</li> <li>• Disruption to commerce and livelihood</li> </ul>                          |

| Emergency Power                                                                                                                                                                                                                       | Effect / Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Considerations                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>(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</p> | <ul style="list-style-type: none"> <li>• Increases capacity and human resources to support response operations</li> <li>• Prioritization of resources required to support response actions</li> </ul> <p>The following are examples but are not limited to:</p> <ul style="list-style-type: none"> <li>• Skilled trades persons</li> <li>• Social Workers (Disaster-psycho-social)</li> <li>• Professional engineers (damage assessment)</li> <li>• Heavy equipment operators (debris removal)</li> <li>• Commercial drivers (buses and transport)</li> <li>• Volunteers (reception centres, mass lodging facilities)</li> <li>• Emergency personnel/first responders (extinguishing fires, movement of mass casualties, security and safety)</li> </ul> | <ul style="list-style-type: none"> <li>• Exemption from civil liability</li> <li>• Availability of personnel</li> <li>• Compensation and reimbursement for services</li> <li>• Protection of the conscripted persons' employment (Section 25 of EPA)</li> </ul>                                                                   |
| <p>(f) Control or prohibit travel to or from any area of British Columbia</p>                                                                                                                                                         | <ul style="list-style-type: none"> <li>• Restrict unnecessary access to the impact area (i.e.: cordoned areas within business district/downtown, heavily damaged and evacuated neighbourhoods)</li> <li>• Prioritization of access for impacted individuals within impact area (to workplaces, businesses, homes etc.)</li> <li>• Control access to major transportation hubs (airports and ferries) which are in use for emergency operations including Disaster Response Routes (DRRs) and logistic movement corridors.</li> <li>• Control travel routes to/from staging areas to ensure rapid flow of humanitarian goods and personnel.</li> </ul>                                                                                                    | <ul style="list-style-type: none"> <li>• Control the measures necessary for the successful implementation of response plans</li> <li>• Impacts to tourism</li> <li>• Impacts to flow of consumer goods</li> <li>• Need to ensure movement of critical resources into impact areas</li> <li>• Impacts to civil freedoms</li> </ul> |



| Emergency Power                                                                                                                                                                                                                                                                                                  | Effect / Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Considerations                                                                                                                                                                                                                                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (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                                                                                  | <ul style="list-style-type: none"> <li>• Order the deployment of operational resources</li> <li>• Direct logistics companies and grocers to support response operations</li> <li>• Prioritize and direct resources for the restoration of:               <ul style="list-style-type: none"> <li>○ Facilities for mass care/sheltering</li> <li>○ Critical transportation routes for logistics</li> <li>○ Essential facilities, utilities, transportation and telecommunication</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Competing mandates and legislation</li> <li>• Competing priorities for critical asset restoration</li> <li>• Shortage of equipment and personnel to conduct assessment and restoration</li> <li>• Shortage of specialized materials</li> </ul>                |
| (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 emergency or a disaster and make arrangements for the adequate care and protection of those persons, livestock, animals and personal property | <ul style="list-style-type: none"> <li>• Evacuation of unsafe buildings to support public safety</li> <li>• Activation of Mass Care services for impacted people and their pets</li> <li>• Provision of security for areas evacuated</li> <li>• Ministry of Agriculture to activate plans for mass care to livestock</li> </ul>                                                                                                                                                                       | <ul style="list-style-type: none"> <li>• Ensuring coordination of mandates and responsibilities</li> <li>• Federal and provincial coordination for livestock</li> <li>• Available security personnel</li> <li>• Decreased psycho-social implications due to concerns for pets and livestock</li> </ul> |
| (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                       | <ul style="list-style-type: none"> <li>• Exemption for responders from civil liability due to trespass</li> <li>• Allows for damage assessment of property by engineers/damage assessors</li> <li>• Allows for access to utility personnel on private property</li> </ul>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Rationale for accessing private property</li> </ul>                                                                                                                                                                                                           |
| (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                                                             | <ul style="list-style-type: none"> <li>• Demolition of unsafe structures</li> <li>• Protection of the environment</li> <li>• Debris removal to open access routes for logistics and emergency personnel</li> </ul>                                                                                                                                                                                                                                                                                    | <ul style="list-style-type: none"> <li>• Protected and heritage site consideration</li> <li>• Impacts to community and cultural values</li> <li>• Loss of income</li> <li>• Federal/provincial coordination</li> </ul>                                                                                 |

| Emergency Power                                                                                                                                                                                                                                                   | Effect / Action                                                                                                                                                                                                                                                                                                                           | Considerations                                                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| (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                                                                                                         | <ul style="list-style-type: none"> <li>• Construction of temporary roads, bridges and access routes damaged by shaking or liquefaction</li> <li>• Construction of temporary housing</li> <li>• Construction of temporary commercial area</li> <li>• Construction of temporary public works (e.g.: bailey bridges, berms, etc.)</li> </ul> | <ul style="list-style-type: none"> <li>• Easing of building codes to enable quicker restoration</li> <li>• Access to materials, equipment and personnel</li> <li>• Temporary housing location, design and transition to permanent housing plan</li> <li>• Business resumption to support community stabilization</li> </ul> |
| (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. | <ul style="list-style-type: none"> <li>• Ensures responders have access to limited resources</li> <li>• Ensures the public has access to essential supplies</li> <li>• Rationing/equitable sharing of critical and/or limited resources</li> </ul>                                                                                        | <ul style="list-style-type: none"> <li>• Supply and demand and determination of fair prices for both impacted individuals and businesses</li> <li>• Public confidence</li> <li>• Economic equity and stabilization</li> <li>• Potential security considerations to maintain order and ensure fairness</li> </ul>            |

## Appendix B-2: State of Emergency Template

### Declaration of State of Emergency

#### ORDER

WHEREAS an earthquake occurs in the Province of British Columbia;

AND WHEREAS there exists an emergency and there is an imminent threat to lives, property and public safety;

AND WHEREAS this earthquake emergency 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;

NOW THEREFORE:

IT IS HEREBY ORDERED pursuant to Section 9 (1) of the *Emergency Program Act* (RS, 1996, Chap 111) that a state of emergency exists in the entire Province of British Columbia;

IT IS FURTHER ORDERED THAT the Province of British Columbia, its employees, servants and agents are empowered pursuant to Section 10(1)(a) of the *Emergency Program Act* to do all acts and implement all procedures that are considered necessary to prevent or to alleviate the effects of the emergency.

ORDERED by the Minister responsible for the *Emergency Program Act* this date *[date]* to remain in force for 14 days until *[date]* at midnight unless cancelled by order of the Minister responsible or the Lieutenant Governor in Council.

---

The Honorable [name]  
Minister of Justice

## **Annex C: Request for Federal Assistance**

### **Appendix C-1: Request for Federal Assistance Process**

A Request for Assistance (RFA) is the formalization of the need, at the request of the Province of British Columbia, for the federal government to provide support towards emergency response efforts. The Province must indicate the desired effects and/or capabilities they require, and confirm that all other potential resources within the province, including private sector/commercial resources, have been considered and found to be inadequate, unavailable or non-existent. The Government Operations Centre (GOC) is the point of entry of the RFA into the Government of Canada (GC) and the Public Safety Canada Regional Director (RD) acts as the senior GOC representative in the federal region.

The RD maintains a liaison capability with the Province, within the PECC/PERRC, on behalf of the GOC and facilitates direct information sharing between the PECC and the GOC. The facilitation/liaison function includes working with the Province as it prepares correspondence to the Minister of Public Safety requesting federal assistance.

The RFA should come from at least the Assistant Deputy Minister level and the initial communication may be made by phone call or email to the Director General GOC. Ultimately, it should take the form of a signed original letter from the British Columbia Minister of Justice/representative to the federal Minister of Public Safety.

Once received, the GOC's primary logistics responsibility requires the coordination of sourcing and deployment of materiel and human resources in response to the request. Concurrently, the RD will source within the region through the Federal Coordination Group, which leads the regional (operational level) federal response planning in support of and in conjunction with national (strategic level) planning at the direction of the GOC.

## Appendix C-2: Request for Federal Assistance Template Letter

[Date]

The Honourable [Minister's Name]  
Minister of Public Safety and Emergency Preparedness  
House of Commons  
Ottawa, Ontario K1A 0A6

Dear Minister:

The Province of British Columbia has been severely affected by a catastrophic earthquake in the [Vancouver/Victoria] area resulting in a catastrophic impact on the people and critical infrastructure. It is immediately apparent that the situation requires resources beyond those currently available in British Columbia, although the Province is still determining the specifics of the destruction. Life-saving efforts are the immediate priority while life-sustaining capabilities will also be required at the earliest opportunity as the available resources will be quickly expended.

As such, the Province of British Columbia immediately requires the following capabilities:

- **Heavy urban search and rescue capabilities** to operate in a self-sufficient mode in austere conditions within a large, high-density city where the estimated casualties are [#] and the size of the search area is [#].
- **Reconnaissance** of the following sites impacted and surrounding areas [*identify impact area*] by satellite, aerial and marine modes to provide imagery and comprehensive reports on status of these sites to develop the common operating picture.
- **Engineering expertise** to augment provincial resources to conduct engineer/structural assessments of life-safety and life-sustaining critical infrastructure.
- **Nourishment and water**, including food storage capability, to feed, hydrate and maintain healthy conditions for [#] people for an indeterminate period of time, to be clarified at a later date.
- **Provision of adequate sewage disposal and sanitation** for # people.
- **Provision for the coordination of international humanitarian organizations** with a view to ensuring they are principled, timely, effective and efficient, and contribute to longer-term recovery
- **Provision of mass fatality temporary storage capability** to safely store # fatalities
- **Provision of mass care assistance** to provide cots and bedding for # people
- **Provision of temporary lodging facilities**, including portable structure for # people
- **Provision of auxiliary power** to [*identify numbers and required capacity*]

Therefore, I, [Minister's name], British Columbia Minister of Justice, request provision of federal resources to meet the desired effects in support of the current response to this disaster. These

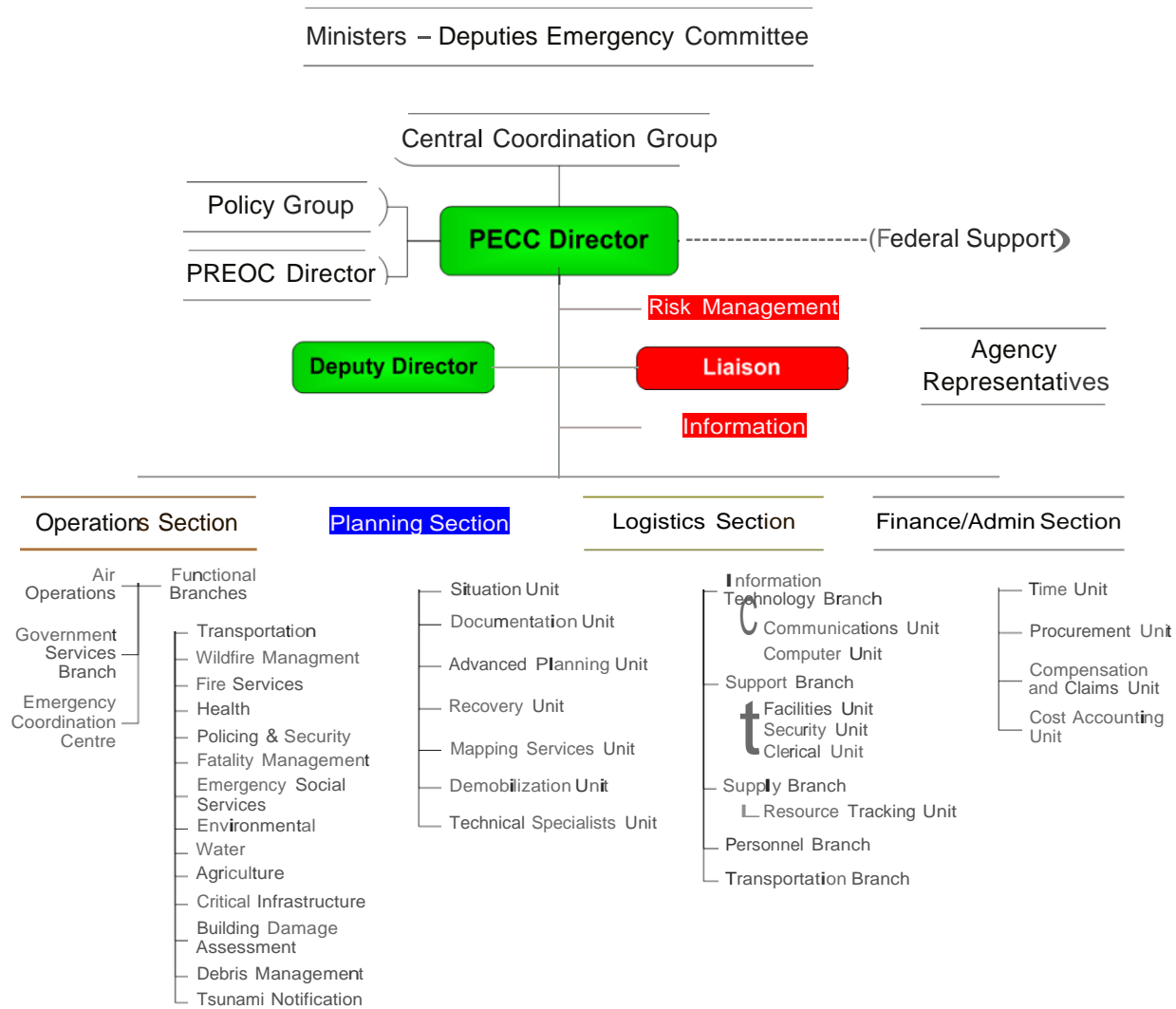
resources will be released at the earliest opportunity when they are no longer required for life-safety or life-sustaining measures.

---

The Honourable [name]  
Minister of Justice

# Annex D- Expanded PECC Organization Function Chart

Figure 77- Expanded PECC Organization Function Chart



## Annex E - Agency Communication and Telecommunication Procedures

Following a catastrophic earthquake in the Greater Victoria or Greater Vancouver areas, agency representatives are to contact their EOCs according to business continuity procedures. If EOCs are unavailable, agency representative are to call their local PREOC landlines and satellite phones. Those who are unable to contact EMBC within one hour should assume this plan has been activated ([See Annex F: EMBC Contact Information](#)).

Other than in the case of a life-threatening emergency, the general public is advised to avoid making telephone calls from cell phones and landlines. For emergency situations, call 911 (do not text). For information about services, such as where to get assistance, food and water or the location of mass care/sheltering, the general public is to contact their local government.

Landline, cellular and data network services will most likely be degraded or interrupted; therefore, it may be necessary to use radio and satellite technology, in place of common carrier systems, as the primary methods for communicating information. Alternate telecommunications methods will lack the capacity and familiarity of common carrier systems which include telephone, cellular and email.

*Table 3: Telecommunication Prioritization* (below) identifies various scenarios that may be experienced after an earthquake. This table is based on the premise that as the severity of earthquake impacts increase, reliance on alternate telecommunications methods will also increase. A corresponding decrease in communications capacity and reliability will also occur. During periods of degraded communication, the accuracy, brevity and criticality of all communications must be carefully managed.



**Table 2 - Telecommunication Prioritization**

| <b>Available technology</b>                                 | <b>Voice</b>                                                                                                                                                                                                                  | <b>Data</b>                                                                                                                          |
|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>All technologies available</b>                           | <ol style="list-style-type: none"> <li>1. Phone (land, cell)</li> <li>2. Local area/regional radio network (commercial VHF or UHF)</li> <li>3. Satellite phone</li> <li>4. MSAT/EmergNet</li> <li>5. Amateur radio</li> </ol> | <ol style="list-style-type: none"> <li>1. Email</li> <li>2. Fax</li> <li>3. Satellite data</li> <li>4. Amateur radio data</li> </ol> |
| <b>No phone lines (land, cell)<br/>Operational internet</b> | <ol style="list-style-type: none"> <li>1. Local area/regional radio network (commercial VHF or UHF)</li> <li>2. Satellite phone</li> <li>3. MSAT/EmergNet</li> <li>4. Amateur radio</li> </ol>                                | <ol style="list-style-type: none"> <li>1. Email</li> <li>2. Satellite data</li> <li>3. Amateur radio data</li> </ol>                 |
| <b>No internet<br/>Operational phone lines</b>              | <ol style="list-style-type: none"> <li>1. Phone (land, cell)</li> <li>2. Local area/regional radio network (commercial VHF or UHF)</li> <li>3. Satellite phone</li> <li>4. MSAT/EmergNet</li> <li>5. Amateur radio</li> </ol> | <ol style="list-style-type: none"> <li>1. Fax</li> <li>2. Satellite data</li> <li>3. Amateur radio data</li> </ol>                   |
| <b>No phone lines (land, cell)<br/>No internet</b>          | <ol style="list-style-type: none"> <li>1. Local area/regional radio network (commercial VHF or UHF)</li> <li>2. Satellite phone</li> <li>3. MSAT/EmergNet</li> <li>4. Amateur radio</li> </ol>                                | <ol style="list-style-type: none"> <li>1. Satellite data</li> <li>2. Amateur radio data</li> </ol>                                   |

## Annex F: EMBC Contact Information

|                                                                                                                                                                  |                                                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>South West Region</b><br/> 14292 Green Timbers Way<br/> Surrey, B.C.<br/> V3T 0J4<br/> Tel: 604 586-4390<br/> Fax: 604 586-4334</p>                        | <p><b>Central Region</b><br/> 1255-D Dalhousie Drive<br/> Kamloops, B.C.<br/> V2C 5Z5<br/> Tel: 250 371-5240<br/> Fax: 250 371-5246</p>                                                                          |
| <p><b>South East Region</b><br/> 403 Vernon Street<br/> Nelson, B.C.<br/> V1L 4E6<br/> Tel: 250 354-5904<br/> Fax: 250 354-6561</p>                              | <p><b>North East Region</b><br/> 3235 Westwood Drive<br/> Prince George, B.C.<br/> V2N 1S4<br/> Tel: 250 612-4172<br/> Fax: 250 612-4171</p>                                                                     |
| <p><b>North West Region</b><br/> Suite 1B - 3215 Eby Street<br/> Terrace, B.C.<br/> V8G 2X8<br/> Tel: 250 615-4800<br/> Fax: 250 615-4817</p>                    | <p><b>Vancouver Island Region</b><br/> Block A - Suite 200<br/> 2261 Keating Cross Road<br/> Saanichton B.C.<br/> V8M 2A5<br/> Tel: 250 952-5848<br/> Fax: 250 952-4304</p>                                      |
| <p><b>Headquarters</b><br/> Block A - Suite 200<br/> 2261 Keating Cross Road<br/> Saanichton B.C.<br/> V8M 2A5<br/> Tel: 250 952-4913<br/> Fax: 250 952-4888</p> | <p><b>Recovery and Funding Programs</b><br/> Block A - Suite 200<br/> 2261 Keating Cross Road<br/> Saanichton B.C.<br/> V8M 2A5<br/> Tel: 250 952-5505<br/> Toll Free: 1 888 257-4777<br/> Fax: 250 952-5542</p> |

## Annex G: Critical Information Requirements

EMBC uses the below incident reporting guide on a regular basis to gather information to the following questions:

| Basic Information                                                                                                        | Key Effects                                                                           | Action Underway                                                                                    | Follow up Action                                                                              |
|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| What happened (hazard)? Is the situation under control and what is the likely trend (deteriorating, neutral, improving)? | What population is affected?                                                          | Who is currently in command?                                                                       | What is the short-term situation and plan (define in time and resources)?                     |
| When and where did it happen?                                                                                            | How are they affected?                                                                | What is the status of response so far (e.g. resources applied are effective, SOLE declared, etc.)? | What is the likely long-term situation and plan (define in time and resources)?               |
| What was the cause?                                                                                                      | How long will they be affected?                                                       | Has mutual aid been requested (local government, provincial, federal, PNEMA, etc.)?                | What is our proposed briefing schedule (email updates, coordination calls, CCG, M-DEC, etc.)? |
| How did we learn of the incident?                                                                                        | How many dead/injured/missing?                                                        |                                                                                                    | What are the emergency public information requirements (updates, interviews, etc.)?           |
| When did we respond?                                                                                                     | What is the extent of damage to infrastructure?                                       |                                                                                                    | What actions or decisions are needed or anticipated (e.g. ADM and/or inter-ministry)?         |
| What did we do?                                                                                                          | What is the current impact on local / provincial government (jurisdictions affected)? |                                                                                                    |                                                                                               |

Due to the complexity of a catastrophic earthquake, the PECC/PERRC will use the following Critical Information Requirements (CIR) chart to guide information gathering and reporting efforts to answer the above questions and to develop a common operating picture to facilitate coordinated decision making. CIRs define the type of information required and potential sources. While the PECC/PERRC is the primary user of the CIRs, all response organizations should refer to the CIRs to understand the information they will be required to provide.

The below table outlines:

1. Critical Information Requirements
2. Information Categories: category groups of information within a CIR. Note: some information categories may not be applicable to a given CIR
3. Specific Information Required: the specific questions to be answered for each information category within a CIR. Note: Some questions may not be applicable to a given information category.
4. Information Source: the potential ministries, agencies, authorities, and sources that may have the required information. Information sources may “push” the required info, or the responsible authority may “pull” the information from the source.
5. From: responsible agencies tasked with collecting, analyzing, collating and disseminating the information to the PECC/PERRC.
6. Reporting Requirements: the method and time for transmitting the information.

| CIR# | CIR                                      | Information Categories                                                                                                                                                                                                                                                                                                                                          | Specific Information Required                                                                                                                                                                                                                                                                                                                                                        | Information Source<br>(Those that may have information required)                                                                                                                                                                                                                               | Responsible Authority (tasked with collecting, analyzing, collating and disseminating info to PECC/PERRC)                                                                                                                   | Reporting Requirements (method, timeline)                                                                                                                                                           |
|------|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <b>Event characteristics and impacts</b> | <ul style="list-style-type: none"> <li>• Initial earthquake event</li> <li>• Secondary effects:               <ul style="list-style-type: none"> <li>○ Aftershocks</li> <li>○ Tsunamis</li> <li>○ Fires</li> <li>○ Landslides</li> <li>○ Liquefaction</li> <li>○ Hazardous Material</li> <li>○ Flood/inundation</li> <li>○ Environmental</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>• Date/Time</li> <li>• Location</li> <li>• Event parameters (depth, size, scope, magnitude, area)</li> <li>• Distances from communities</li> <li>• Extent of damage sustained</li> <li>• Affected jurisdictions (national, provincial, regional, municipal, first nations)</li> <li>• Assets at risk</li> <li>• Hazards or threats</li> </ul> | <ul style="list-style-type: none"> <li>• Earthquake – NRCAN, USGS</li> <li>• Tsunami – DFO, NOAA, NTWC</li> <li>• BC SIMS</li> <li>• First responders</li> <li>• Local authorities</li> <li>• First Nations</li> <li>• CI owners/operators</li> <li>• Media</li> <li>• Social media</li> </ul> | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• EOCs</li> <li>• Provincial ministries</li> <li>• Federal government departments/ agencies</li> <li>• ECC</li> <li>• PECC</li> <li>• Local authorities</li> </ul> | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |

| <b>CIR#</b> | <b>CIR</b>                                                   | <b>Information Categories</b>                                                                                                                                                                     | <b>Specific Information Required</b>                                                                                                                                                                                                              | <b>Information Source</b><br>(Those that may have information required)                                                                                                                      | <b>Responsible Authority</b> (tasked with collecting, analyzing, collating and disseminating info to PECC/PERRC)                                                                                                           | <b>Reporting Requirements (method, timeline)</b>                                                                                                                                                    |
|-------------|--------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2</b>    | <b>Casualty status and impacts</b>                           | <ul style="list-style-type: none"> <li>• Deaths</li> <li>• Injuries</li> <li>• Trapped persons</li> <li>• Displaced persons</li> <li>• Special needs</li> <li>• Vulnerable populations</li> </ul> | <ul style="list-style-type: none"> <li>• Numbers</li> <li>• Locations</li> <li>• Status</li> <li>• Onsite capacity to manage</li> <li>• Prioritized triage</li> <li>• Special care needs</li> <li>• Resource concerns and requirements</li> </ul> | <ul style="list-style-type: none"> <li>• Responder agencies</li> <li>• Medical facilities</li> <li>• EOCs</li> <li>• Social media</li> <li>• Media</li> <li>• Social media</li> </ul>        | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• EOCs</li> <li>• Provincial ministries</li> <li>• Federal government departments/agencies</li> <li>• Private sector EOCs</li> <li>• Local authorities</li> </ul> | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |
| <b>3</b>    | <b>Structures status and impacts</b>                         | <ul style="list-style-type: none"> <li>• Government</li> <li>• Commercial</li> <li>• CI</li> <li>• Residential</li> <li>• Schools</li> <li>• Prisons</li> </ul>                                   | <ul style="list-style-type: none"> <li>• Location</li> <li>• Impacts</li> <li>• Usability</li> <li>• Hazards or threats</li> </ul>                                                                                                                | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• EOCs</li> <li>• Provincial ministries</li> <li>• CI owners/operators</li> <li>• Private sector</li> <li>• Social media</li> </ul> | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• Provincial ministries</li> <li>• CI owners/operators</li> <li>• Local authorities</li> </ul>                                                                    | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |
| <b>4</b>    | <b>Key government leadership and EOCs status and impacts</b> | <ul style="list-style-type: none"> <li>• Cabinet facilities</li> <li>• Cabinet</li> <li>• MOCs</li> <li>• Regional EOCs</li> <li>• Local authority EOCs</li> </ul>                                | <ul style="list-style-type: none"> <li>• Operational status</li> <li>• Estimated scope of damage</li> <li>• Estimated time to resumption of operations</li> <li>• Impacts</li> <li>• Resource concerns and requirements</li> </ul>                | <ul style="list-style-type: none"> <li>• Ministries &amp; crown corporations</li> <li>• Local governments</li> <li>• Media</li> <li>• Social media</li> </ul>                                | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• MOCs</li> <li>• EOCs</li> <li>• Federal Government Departments &amp; Agencies</li> <li>• Local authorities and First Nations</li> </ul>                         | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |
| <b>5</b>    | <b>Emergency services status and impacts</b>                 | <ul style="list-style-type: none"> <li>• Police</li> <li>• Fire</li> <li>• Ambulance</li> <li>• Hospital</li> <li>• SAR</li> <li>• PSLV groups</li> </ul>                                         | <ul style="list-style-type: none"> <li>• Operational status</li> <li>• Estimated scope of damage</li> <li>• Estimated time to operational</li> <li>• Impacts</li> </ul>                                                                           | <ul style="list-style-type: none"> <li>• Responder agencies</li> <li>• Health authorities</li> <li>• SAR groups</li> <li>• PSLV groups</li> </ul>                                            | <ul style="list-style-type: none"> <li>• EOCs</li> <li>• PREOCs</li> <li>• Local authorities</li> </ul>                                                                                                                    | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |

| CIR# | CIR                                             | Information Categories                                                                                                                                                                                                                                                                                                                                                                                                                                            | Specific Information Required                                                                                                                                                                                                              | Information Source<br>(Those that may have information required)                                                                                                                                                                                                         | Responsible Authority (tasked with collecting, analyzing, collating and disseminating info to PECC/PERRC)                                                                                                    | Reporting Requirements (method, timeline)                                                                                                                                                     |
|------|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                 | <ul style="list-style-type: none"> <li>Other</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>Resource concerns and requirements</li> </ul>                                                                                                                                                       |                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                              |                                                                                                                                                                                               |
| 6    | <b>Communication Systems status and impacts</b> | <ul style="list-style-type: none"> <li>Government</li> <li>Emergency services communications               <ul style="list-style-type: none"> <li>911 service</li> <li>First responder communication systems</li> </ul> </li> <li>Telecom               <ul style="list-style-type: none"> <li>Voice Network</li> <li>Data Network</li> <li>Wireless Network</li> <li>Satellite Network</li> <li>Radio Network</li> <li>Television network</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>Operational status</li> <li>Capacity/capabilities</li> <li>Estimated scope of damage</li> <li>Estimated time to operational</li> <li>Impacts</li> <li>Resource concerns and requirements</li> </ul> | <ul style="list-style-type: none"> <li>MOCs</li> <li>Telecom CI owners/operators</li> <li>Industry Canada</li> <li>PSAPs</li> <li>Radio Network operators (e.g. E-Comm, CREST)</li> <li>Internet Service Providers (ISPs)</li> <li>Fibre Optic Network Owners</li> </ul> | <ul style="list-style-type: none"> <li>PREOCs</li> <li>MOCs</li> <li>EOCs</li> <li>Local authorities</li> <li>Federal Government Departments/ Agencies</li> <li>Private sector operations centres</li> </ul> | <ul style="list-style-type: none"> <li>Immediate - verbal and/or electronic</li> <li>Updates - as available</li> <li>Situation report &amp; maps - as soon as possible after event</li> </ul> |
| 7    | <b>Transportation CI status and impacts</b>     | <ul style="list-style-type: none"> <li>Road</li> <li>Rail</li> <li>Air</li> <li>Marine</li> </ul> <p><i>Refer to Appendix G1 for detailed list</i></p>                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>Operational status</li> <li>Estimated scope of damage</li> <li>Estimated time to operational</li> <li>Impacts</li> <li>Resource concerns and requirements</li> </ul>                                | <ul style="list-style-type: none"> <li>CI Owners</li> <li>Local governments</li> <li>Social media</li> <li>MoTI</li> <li>Transport Canada</li> </ul>                                                                                                                     | <ul style="list-style-type: none"> <li>CI Owners</li> <li>PREOCs</li> <li>Provincial ministries</li> <li>EOCs</li> <li>RMTC</li> <li>TC Situation Centre</li> <li>Local authorities</li> </ul>               | <ul style="list-style-type: none"> <li>Immediate - verbal and/or electronic</li> <li>Updates - as available</li> <li>Situation report &amp; maps - as soon as possible after event</li> </ul> |

| <b>CIR#</b> | <b>CIR</b>                                               | <b>Information Categories</b>                                                                                                                                                                                | <b>Specific Information Required</b>                                                                                                                                                                                                                                             | <b>Information Source</b><br>(Those that may have information required)                                                                                                                               | <b>Responsible Authority</b> (tasked with collecting, analyzing, collating and disseminating info to PECC/PERRC)                                                                                      | <b>Reporting Requirements (method, timeline)</b>                                                                                                                                                    |
|-------------|----------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8           | <b>Lifeline utilities status and impacts</b>             | <ul style="list-style-type: none"> <li>• Power</li> <li>• Water</li> <li>• Waste</li> <li>• Natural gas</li> </ul>                                                                                           | <ul style="list-style-type: none"> <li>• Operational status</li> <li>• Estimated scope of damage</li> <li>• Estimated time to operational</li> <li>• Impacts</li> <li>• Resources concerns and requirements</li> </ul>                                                           | <ul style="list-style-type: none"> <li>• CI Owners (BC Hydro, Fortis)</li> <li>• Local governments</li> <li>• Oil and Gas Commission</li> <li>• Providers of water</li> <li>• Social media</li> </ul> | <ul style="list-style-type: none"> <li>• CI Owners</li> <li>• PREOCs</li> <li>• Provincial ministries</li> <li>• Federal Department/ Agencies</li> <li>• EOCs</li> <li>• Local authorities</li> </ul> | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |
| 9           | <b>Key logistics status and impacts</b>                  | <ul style="list-style-type: none"> <li>• Water</li> <li>• Food</li> <li>• Medical supplies</li> <li>• Temporary shelter</li> <li>• POL (petroleum, oil, lubricants)</li> <li>• Staging areas</li> </ul>      | <ul style="list-style-type: none"> <li>• Critical needs</li> <li>• Existing capacity &amp; time to depletion</li> <li>• Activation of staging areas</li> <li>• Multi-modal capacity of staging areas</li> <li>• Impacts</li> <li>• Resource concerns and requirements</li> </ul> | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• MoTI</li> <li>• EOCs</li> <li>• Private sector transportation owner/operators</li> </ul>                                                   | <ul style="list-style-type: none"> <li>• Central PREOC</li> </ul>                                                                                                                                     | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> <li>• Situation report &amp; maps - as soon as possible after event</li> </ul> |
| 10          | <b>Critical Resource Shortfall inhibiting activities</b> | <ul style="list-style-type: none"> <li>• Immediate Response activities (not captured under another CIR)</li> <li>• Sustained Response planning/activities</li> <li>• Recovery planning/activities</li> </ul> | <ul style="list-style-type: none"> <li>• Prioritized needs</li> <li>• What capacity is required &amp; Where required</li> <li>• When required</li> <li>• Receiver contact</li> <li>• Special needs, concerns</li> </ul>                                                          | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• MOCs</li> <li>• EOCs</li> <li>• Private sector</li> </ul>                                                                                  | <ul style="list-style-type: none"> <li>• PREOCs</li> <li>• Local authorities</li> </ul>                                                                                                               | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic resource requests</li> <li>• Requests for assistance as available</li> </ul>                                          |
| 11          | <b>Weather impacts</b>                                   | <ul style="list-style-type: none"> <li>• Current</li> <li>• Forecast</li> </ul>                                                                                                                              | <ul style="list-style-type: none"> <li>• Current</li> <li>• Short term forecasts</li> <li>• Long term forecasts</li> <li>• Impacts</li> </ul>                                                                                                                                    | <ul style="list-style-type: none"> <li>• Forecasting agencies</li> </ul>                                                                                                                              | <ul style="list-style-type: none"> <li>• Environment Canada</li> <li>• Wildfire Mgt Branch</li> </ul>                                                                                                 | <ul style="list-style-type: none"> <li>• Stakeholder coordination calls</li> <li>• Electronic products - as available</li> </ul>                                                                    |

| CIR# | CIR                         | Information Categories                                                                       | Specific Information Required                                                                                                                                                                                                                                                                                | Information Source<br>(Those that may have information required)                                                                                                                  | Responsible Authority (tasked with collecting, analyzing, collating and disseminating info to PECC/PERRC) | Reporting Requirements (method, timeline)                                                                                  |
|------|-----------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| 12   | <b>Status of Assistance</b> | <ul style="list-style-type: none"> <li>• Pre-planned</li> <li>• Un-planned offers</li> </ul> | <ul style="list-style-type: none"> <li>• Agreements activated</li> <li>• Approvals for activation status and concerns</li> <li>• Status of critical “push” items</li> <li>• Status of available resources</li> <li>• Reception, staging, and logistic requirements to accept offers of assistance</li> </ul> | <ul style="list-style-type: none"> <li>• Assisting agencies</li> <li>• NGO’s</li> <li>• GOC</li> <li>• PNEMA signatories</li> <li>• Canadian Red Cross</li> <li>• AEMA</li> </ul> | <ul style="list-style-type: none"> <li>• Assisting agency operations centres</li> </ul>                   | <ul style="list-style-type: none"> <li>• Immediate - verbal and/or electronic</li> <li>• Updates - as available</li> </ul> |



## Appendix G-1: Critical and Key Transportation Routes and Features

Critical transportation routes and features for road, air, marine and rail allow for access to and from staging areas within the Greater Vancouver or Greater Victoria areas. Key transportation routes and features that allow for access to the Greater Vancouver or Greater Victoria areas. The following chart categorizes multimodal transportation features and represents critical information requirements for the Province to prioritize response operations, such as damage assessment, debris removal and restoration. Local authorities, MoTI, and transportation authorities are required to report status of the below critical and key transportation routes and features through regular reporting channels (e.g. local EOCs, RTMC, PREOCs and PECC).

| Category                                                                                  | No. | Information Requirement                                                                                | Source Agencies | Notes                |
|-------------------------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------|-----------------|----------------------|
| <b>Roads, includes major bridges:</b><br>Status of critical and key transportation routes | 1   | Hwy 1 (between BC-Alberta border near Golden and Horseshoe Bay and between Departure Bay and Victoria) | MoTI            | Key & Critical Route |
|                                                                                           | 2   | Hwy 2 (between BC-Alberta border and Dawson Creek)                                                     | MoTI            | Key Route            |
|                                                                                           | 3   | Hwy 3 (between BC-Alberta Border near Sparwood and Hope)                                               | MoTI            | Key Route            |
|                                                                                           | 4   | Hwy 4 (between Port Alberni Port and Hwy 19)                                                           | MoTI            | Key Route            |
|                                                                                           | 5   | Hwy 5 (between Tete Jaune Cache and Hope)                                                              | MoTI            | Key Route            |
|                                                                                           | 6   | Hwy 7 (between Hope and Coquitlam)                                                                     | MoTI            | Critical Route       |
|                                                                                           | 7   | Hwy 7B (Mary Hill Bypass)                                                                              | MoTI            | Critical Route       |
|                                                                                           | 8   | Hwy 9 (between Hwy 1 and Agassiz)                                                                      | MoTI            | Critical Route       |
|                                                                                           | 9   | Hwy 10 (between Hwy 1 and Hwy 91)                                                                      | MoTI            | Critical Route       |
|                                                                                           | 10  | Hwy 11 (between Canada-US border in Abbotsford and Mission)                                            | MoTI            | Critical Route       |
|                                                                                           | 11  | Hwy 13 (between Canada-US border in Aldergrove and Hwy 1)                                              | MoTI            | Critical Route       |
|                                                                                           | 12  | Hwy 14 (between Hwy 1 and Sooke)                                                                       | MoTI            | Critical Route       |
|                                                                                           | 13  | Hwy 16 (between BC-Alberta border near Mt. Robson and Prince Rupert)                                   | MoTI            | Key Route            |
|                                                                                           | 14  | Hwy 17 (South Fraser Perimeter Road and between Swartz Bay and Victoria)                               | MoTI            | Critical Route       |
|                                                                                           | 15  | Hwy 19 (between Duke Point                                                                             | MoTI            | Key Route            |

| Category                                                                    | No. | Information Requirement                                                                                            | Source Agencies                         | Notes                |  |
|-----------------------------------------------------------------------------|-----|--------------------------------------------------------------------------------------------------------------------|-----------------------------------------|----------------------|--|
|                                                                             |     | and Campbell River)                                                                                                |                                         |                      |  |
|                                                                             | 16  | Hwy 49 (between BC-Alberta border and Dawson Creek)                                                                | MoTI                                    | Key Route            |  |
|                                                                             | 17  | Hwy 91 (between Hwy 99 in Delta and Hwy 99 in Richmond)                                                            | MoTI                                    | Critical Route       |  |
|                                                                             | 18  | Hwy 91A (between Alex Fraser Bridge and Stewardson Way)                                                            | MoTI                                    | Critical Route       |  |
|                                                                             | 19  | Hwy 97 (between Dawson Creek and Cache Creek)                                                                      | MoTI                                    | Key Route            |  |
|                                                                             | 20  | Hwy 99 (between Cache Creek and the Canada-US border in Surrey)                                                    | MoTI                                    | Key & Critical Route |  |
|                                                                             | 21  | LOCAL ROADS BELOW                                                                                                  |                                         |                      |  |
|                                                                             | 22  | King George Blvd.                                                                                                  | City of Surrey                          | Critical Route       |  |
|                                                                             | 23  | Golden Ears Way                                                                                                    | TransLink                               | Critical Route       |  |
|                                                                             | 24  | Golden Ears Bridge to Hwy 7                                                                                        | TransLink                               | Critical Route       |  |
|                                                                             | 25  | Stewardson Way, Front Street, Brunette Ave.                                                                        | City of New Westminster                 | Critical Route       |  |
|                                                                             | 26  | Marine Way, Southeast Marine Drive, Southwest Marine Drive (between Queensborough Bridge and Grant McConachie Way) | City of Burnaby and City of Vancouver   | Critical Route       |  |
|                                                                             | 27  | Boundary Rd. (between Marine Way and Highway 1)                                                                    | City of Burnaby and City of Vancouver   | Critical Route       |  |
|                                                                             | 28  | Knight St. and Clark Dr. (from Hwy 91 to East Hastings St.)                                                        | City of Vancouver, TransLink            | Critical Route       |  |
|                                                                             | 29  | West Georgia St.; and Stanley Park Causeway (between Lions Gate Bridge and Burrard)                                | City of Vancouver                       | Critical Route       |  |
|                                                                             | 30  | Burrard St. (between West Georgia and West Hastings St.)                                                           | City of Vancouver                       | Critical Route       |  |
|                                                                             | 31  | Broadway (from Boundary Road to Oak Street)                                                                        | City of Vancouver                       | Critical Route       |  |
|                                                                             | 32  | Grant McConachie Way (from Southwest Marine Drive to YVR airport)                                                  | YVR Airport Authority, Transport Canada | Critical Route       |  |
|                                                                             | 33  | Deltaport Way, Roberts Bank Way (from Highway 17)                                                                  | MoTI                                    | Critical Route       |  |
| <b>Marine:</b><br>Ports and ferry terminals<br>**note several smaller ferry | 34  | Port Metro Vancouver                                                                                               | SWE PREOC<br>Port Metro Vancouver       |                      |  |
|                                                                             | 35  | Port of Squamish                                                                                                   | SWE PREOC<br>Port of Squamish           |                      |  |
|                                                                             | 36  | Victoria Harbour                                                                                                   | VIR PREOC                               |                      |  |

| Category                                         | No. | Information Requirement      | Source Agencies                              | Notes                                                                                                                  |
|--------------------------------------------------|-----|------------------------------|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
| terminals available                              |     |                              | Victoria Harbour Authority                   |                                                                                                                        |
|                                                  | 37  | Prince Rupert Harbour        | NWE PREOC<br>Prince Rupert Harbour Authority |                                                                                                                        |
|                                                  | 38  | Tsawwassen Ferry Terminal    | SWE PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 39  | Swartz Bay Ferry Terminal    | VIR PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 40  | Duke Point Ferry Terminal    | VIR PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 41  | Departure Ferry Terminal     | VIR PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 42  | Horseshoe Bay Ferry Terminal | SWE PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 43  | Brentwood Bay Ferry Terminal | VIR PREOC<br>BC Ferries                      |                                                                                                                        |
|                                                  | 44  | Mill Bay Ferry Terminal      | VIR PREOC<br>BC Ferries                      |                                                                                                                        |
| <b>Airports:</b><br>Airports,<br>heliports, etc. | 45  | Vancouver Airport (YVR)      | SWE PREOC                                    | Airport authorities report to Transport Canada.<br>Transport Canada approved aerodromes in:<br>• VIR = 85<br>• SWE =39 |
|                                                  | 46  | Abbotsford Airport (YXX)     | SWE PREOC                                    |                                                                                                                        |
|                                                  | 47  | Victoria Airport (YYJ)       | VIR PREOC                                    |                                                                                                                        |
|                                                  | 48  | Nanaimo Airport (YCD)        | VIR PREOC                                    |                                                                                                                        |
|                                                  | 49  | Comox Airport (YQQ)          | VIR PREOC                                    |                                                                                                                        |
|                                                  | 50  | Kelowna Airport (YLW)        | CTL PREOC                                    |                                                                                                                        |
|                                                  | 51  | Kamloops Airport (YKA)       | CTL PREOC                                    |                                                                                                                        |
|                                                  | 52  | Prince George Airport (YXS)  | NEA PREOC                                    |                                                                                                                        |

## Annex H: Search and Rescue

Search and Rescue (SAR) operational capabilities that exist within British Columbia include ground, marine, air and urban. Following a catastrophic earthquake, additional SAR assets would be requested and deployed to B.C. to assist with SAR response - specifically the urban component. SAR assets will be coordinated by the Province through the PECC/PERRC in conjunction with responsible federal SAR authorities: the Department of National Defence, the Canadian Coast Guard, and the RCMP. In addition to their primary operational task, SAR assets could be utilized to provide situational understanding and contribute to a comprehensive operating picture.

|                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Heavy Urban Search and Rescue (HUSAR)</b></p> | <p>The Government Operations Centre, upon notification of a catastrophic earthquake affecting Greater Vancouver or Greater Victoria, will immediately coordinate the request and movement of HUSAR teams, both domestic and international, for deployment to B.C. The Province will also employ mutual aid agreements, such as the Pacific Northwest Emergency Management Arrangement (PNEMA), with neighbouring states for HUSAR support. The Province will control, coordinate and prioritize the deployment of all civilian HUSAR assets within B.C. based on local authority and First Nations needs assessment.</p> |
| <p><b>Aeronautical and Marine SAR</b></p>           | <p>Joint Rescue Coordination Centre (JRCC) Victoria at Canadian Forces Base Esquimalt is responsible for the coordination and control of marine and air assets in the Victoria Search and Rescue Region, which encompasses waters in the eastern Pacific Ocean, the Province of British Columbia and the Yukon Territory. JRCC Victoria, or its designated alternate coordination centre, would continue to coordinate these assets in support of the provincial response.</p>                                                                                                                                           |
| <p><b>Air</b></p>                                   | <p>The Provincial Emergency Program Air/Civil Air Search and Rescue Association (PEP Air/CASARA) is a volunteer aviation association that provides air search support services to the National Search and Rescue Program. PEP Air/CASARA would be used as a resource for both SAR and situational understanding reporting.</p>                                                                                                                                                                                                                                                                                           |
| <p><b>Ground</b></p>                                | <p>Ground SAR assets in B.C. are predominantly comprised of dedicated volunteers who do not have the capacity or training to conduct urban search and rescue. For missing persons, the police within that jurisdiction assume responsibility over ground SAR resources. The Province would coordinate the deployment of ground SAR assets from out-of-area to the impact area to assist in locating missing persons or for deployment by local authorities and First Nations in support of their all hazard plans, when required.</p>                                                                                    |
| <p><b>Canada-U.S. Civil Assistance Plan</b></p>     | <p>United States Military assistance, including deployment of military SAR assets, will be approved under the protocols governed by the Canada-U.S. Civil Assistance Plan (CAP). This bi-lateral support will be coordinated by the Department of Foreign Affairs, Trade and Development (DFATD) and the U.S. Department of State. The Canadian Armed Forces will be responsible for coordinating the deployment and employment of U.S. Military forces.</p>                                                                                                                                                             |

## Annex I: Critical Resource List

The following resources have been identified as potential requirements for the response effort. These resources are considered critical as they may be of high demand, have a need to be supplemented because existing resources are inadequate, or are not available within the province. Requests and procurement of these resources will be made throughout the province to support the response effort. In addition the Province of Alberta, coordinated through AEMA, and the Government of Canada, coordinated through the GOC, will source procure and deploy these resources based on requests to activate the *Alberta Emergency Response Plan For a Catastrophic Earthquake in B.C.* and requests to secure federal resources identified in the *Federal Earthquake Response Protocol* through a RFA. The Province may also request these resources through regional and national agreements, such as EMMA and PNEMA.

Resources deemed critical to the response will be controlled by the Province of B.C., and, on request, will be allocated to agencies, PREOCs or EOCs permanently or on a temporary basis, within a fixed time limit. As the situation stabilizes, resources may no longer be deemed critical and will be made available as a general resource.

| Number | Capability                      | Requirement                                                                                                                                                                                                                                                                                                                            | Possible Sources                    |
|--------|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| 1      | Urban Search and Rescue Teams   | <ul style="list-style-type: none"> <li>Must be logistically self-supporting</li> <li>Must be self-deployable to B.C.</li> <li>Must meet International Search and Rescue Advisory Group (INSARAG) standards</li> </ul>                                                                                                                  | GOC, GoA<br>EMMA, PNEMA             |
| 2      | Rescue Personnel/Teams          | <ul style="list-style-type: none"> <li>All rescue personnel/teams to augment on-ground resources</li> <li>Must be self-supporting for 7 days</li> </ul>                                                                                                                                                                                | GOC, National SAR, EMMA, PNEMA      |
| 3      | Damage Assessment               | <ul style="list-style-type: none"> <li>Minimum 100 building inspectors, structural and civil engineers to assess buildings, critical infrastructure and unstable ground</li> <li>Geotechnical engineers to assess landslides, slope stability issues, foundation issues, liquefactions issues and other geotechnical issues</li> </ul> | GOC, GoA, Private, EMMA, PNEMA      |
| 4      | Air Transportation (Helicopter) | <ul style="list-style-type: none"> <li>Likely no limit on the number of helicopters required</li> <li>Helicopter providers may be required to be based from remote field conditions</li> <li>Should be able to provide own maintenance</li> </ul>                                                                                      | GOC, DND, GoA, Private, EMMA, PNEMA |
| 5      | Air Transportation (Airplane)   | <ul style="list-style-type: none"> <li>Movement of supplies, casualties and personnel</li> </ul>                                                                                                                                                                                                                                       | GOC, Private, EMMA, PNEMA           |
| 6      | Marine Transportation           | <ul style="list-style-type: none"> <li>Ideally, ships will be equipped with cranes</li> <li>Amphibious vessels capable of beach landings, or loading landing craft</li> <li>Roll-on, roll-off capability</li> </ul>                                                                                                                    | GOC, Private, EMMA, PNEMA           |

| Number | Capability                                                 | Requirement                                                                                                                                                                                                                                                                                                                                                                                                            | Possible Sources                                                                                                                           |
|--------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| 7      | Ship Loading and Control                                   | <ul style="list-style-type: none"> <li>Receive cargoes, load containers and ships, forward manifests</li> </ul>                                                                                                                                                                                                                                                                                                        | GOC, Private/Ports                                                                                                                         |
| 8      | Reconnaissance                                             | <ul style="list-style-type: none"> <li>Satellite imagery</li> <li>Aerial reconnaissance</li> <li>Marine reconnaissance</li> <li>Ground reconnaissance</li> </ul>                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>GOC</li> <li>GOC, Private</li> <li>GOC, Private</li> <li>Public, First Responders, Media</li> </ul> |
| 9      | Telecommunications Support                                 | <ul style="list-style-type: none"> <li>Capable of digital transmission</li> <li>Able to be integrated into standard computer networks</li> <li>Satellite telephones and data</li> <li>Telecommunications infrastructure: mobile towers for re-establishing cell networks</li> <li>Portable FM radio towers</li> </ul>                                                                                                  | GOC, Private, GoA                                                                                                                          |
| 10     | Coordination of Humanitarian Assistance                    | <ul style="list-style-type: none"> <li>Trained expertise in leading and coordinating the efforts of humanitarian organizations with a view to ensuring that they are principled, timely, effective and efficient, and contribute to longer-term recovery</li> <li>Trained in cluster coordination, data and information management, needs assessments, joint planning, monitoring, evaluation and reporting</li> </ul> | GOC, UN OCHA                                                                                                                               |
| 11     | Emergency Operations Centre Staff                          | <ul style="list-style-type: none"> <li>Trained ICS staff to augment EOCs</li> </ul>                                                                                                                                                                                                                                                                                                                                    | GOC, GoA, EMMA, PNEMA                                                                                                                      |
| 12     | Auxiliary Power Sources                                    | <ul style="list-style-type: none"> <li>For generation of residential services</li> <li>For generation of emergency services, such as hospitals and other services</li> </ul>                                                                                                                                                                                                                                           | GOC, GoA, Private, EMMA, PNEMA                                                                                                             |
| 12a    | Lifeline Utilities (see CI Section) Specialists and Trades | <ul style="list-style-type: none"> <li>Technicians and equipment for restoration of services</li> </ul>                                                                                                                                                                                                                                                                                                                | GOC, GoA, Private, EMMA, PNEMA                                                                                                             |
| 13     | Fuel and Fuel Storage                                      | <ul style="list-style-type: none"> <li>All types of fuel will be required: <ul style="list-style-type: none"> <li>Gas</li> <li>Diesel</li> <li>Aviation fuel</li> <li>Oil</li> <li>Propane</li> <li>Other fuel types</li> </ul> </li> <li>Mobile fuel transport, storage vehicles (e.g. bowsers) and temporary storage facilities (e.g. bladders)</li> </ul>                                                           | GOC, GoA, Private, EMMA, PNEMA                                                                                                             |

| Number | Capability                                                                        | Requirement                                                                                                                                                                                                                                                                                                       | Possible Sources                                                     |
|--------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| 14     | Water Purification, Distribution and Storage Equipment                            | <ul style="list-style-type: none"> <li>Storage for up to 15 million litres of bulk and bottled water per day</li> <li>Includes large and small storage sites and distribution capabilities</li> </ul>                                                                                                             | GOC, CRC, Private, EMMA, PNEMA                                       |
| 15     | Water purification                                                                | <ul style="list-style-type: none"> <li>Up to five million tablets per day</li> <li>Desalination capabilities</li> <li>Mobile purification capabilities</li> <li>Must meet World Health Organization (WHO) standards</li> </ul>                                                                                    | GOC, CRC, IDCBC partners, Private, EMMA, PNEMA                       |
| 16     | Provisions to feed and hydrate public, first responders and surge support         | <p>Food and water for one million people:</p> <ul style="list-style-type: none"> <li>three meals per day for an average of 2100 calories per person</li> <li>15 litres of water/day for drinking, cooking and hygiene<sup>9</sup></li> </ul>                                                                      | GOC, Private, EMMA, PNEMA, Integrated Disaster Council of BC (IDCBC) |
| 16a    | Provide service to plan, prepare and deliver meals to large numbers of people     | <ul style="list-style-type: none"> <li>Capability to provide cooked meals in an emergency/field setting for displaced people and response personnel</li> </ul>                                                                                                                                                    | GOC, CRC, IDCBC partners, Private, Faith-based                       |
| 17     | Refrigeration of food and medical supplies                                        | <ul style="list-style-type: none"> <li>Variation of requirements ranging from ice and portable coolers to industrial size fridges and freezers</li> <li>Large, transportable storage containers</li> </ul>                                                                                                        | GOC, GoA, IDCBC partners, Private                                    |
| 18     | Ability to shelter large numbers of evacuees, hospital patients and surge staff   | <ul style="list-style-type: none"> <li>Requirements will vary depending on impact, season and weather (e.g. heating and/or cooling capabilities for shelters)</li> <li>Large shelter arrangements for responders and hospital patients</li> <li>Small shelter arrangements for individual/family units</li> </ul> | GOC, GoA, CRC, Private, EMMA, PNEMA                                  |
| 18a    | Provide service to plan, prepare, provide, manage and maintain temporary shelters | <ul style="list-style-type: none"> <li>Shelter support teams to manage and maintain temporary shelters</li> </ul>                                                                                                                                                                                                 | GOC, CRC, IDCBC partners, Private                                    |
| 19     | Ability to provide sleeping supplies for up to 25,000 people <sup>10</sup>        | <ul style="list-style-type: none"> <li>Includes mattresses, cots and bedding (blankets/sleeping bags, pillows, etc.) for # personnel</li> </ul>                                                                                                                                                                   | GOC, GoA, CRC, IDCBC partners, Private                               |
| 20     | Provision of washing                                                              | <ul style="list-style-type: none"> <li>Washing facilities, including maintenance</li> </ul>                                                                                                                                                                                                                       | GOC, GoA, CRC,                                                       |

<sup>9</sup> Based on Sphere Humanitarian Guidelines: <http://www.spherehandbook.org/en/the-handbook-structure/>

<sup>10</sup> This number is based on 92,000 displaced persons for the Vancouver Scenario. Approximately half are expected to shelter in place or with friends and family. Half of the remaining will be sourced provincially with approximately 25,000 individual sleeping supplies required.

| Number | Capability                                               | Requirement                                                                                                                                                                                                                                                                                                               | Possible Sources                                                                                                  |
|--------|----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
|        | capabilities                                             | capability, for large numbers of people and emergency services facilities                                                                                                                                                                                                                                                 | Private, EMMA, PNEMA                                                                                              |
| 21     | Provision of sanitation capabilities and sewage removal  | <ul style="list-style-type: none"> <li>5,000-10,000 portable toilets</li> <li>Sewage and waste disposal capabilities</li> </ul>                                                                                                                                                                                           | GOC, GoA, CRC, Private, EMMA, PNEMA                                                                               |
| 21a    | Provision of sanitation and hygiene supplies             | <ul style="list-style-type: none"> <li>Toilet paper, paper towels, cleaning supplies, feminine hygiene products and diapers</li> </ul>                                                                                                                                                                                    | GOC, GoA, Private, EMMA, PNEMA                                                                                    |
| 22     | Heavy equipment to remove debris                         | <ul style="list-style-type: none"> <li>Various types of heavy equipment to transport and dispose of large amounts of debris</li> </ul>                                                                                                                                                                                    | GOC, GoA, MoTI, Private                                                                                           |
| 23     | Provide Healthcare: Emergency, Critical, Acute, Surgical | <ul style="list-style-type: none"> <li>Teams and equipment to augment existing medical facilities</li> <li>Deployable field hospitals with medical teams: <ul style="list-style-type: none"> <li>Logistically self-supporting</li> <li>Meets WHO/Pan American Health Organization (PAHO) standards</li> </ul> </li> </ul> | GOC, CRC, International Aid Agencies, U.S. states                                                                 |
| 24     | Provide Healthcare: Primary Care                         | <p>Medical teams:</p> <ul style="list-style-type: none"> <li>Must meet WHO/HC standards</li> <li>Must meet provincial and health authority licensing requirements</li> </ul>                                                                                                                                              | GOC (PHAC): Utilize Operational Framework for Mutual Aid Requests), CRC, U.S., International medical aid agencies |
| 25     | Provide Psycho-social Support                            | <p>Psycho-social teams:</p> <ul style="list-style-type: none"> <li>Trained psychological first aid providers</li> </ul>                                                                                                                                                                                                   | GOC (PHAC: Utilize Operational Framework for Mutual Aid Requests), Other provinces, CRC, International            |
| 26     | Patient Transport (Air and Ground)                       | <ul style="list-style-type: none"> <li>Medical evacuation platforms for casualty transport</li> <li>Ambulances, air ambulances, and crews <ul style="list-style-type: none"> <li>Meet operational and licensing requirements of BC Ambulance Service</li> </ul> </li> </ul>                                               | Private, GOC, International                                                                                       |
| 27     | Ground Transportation                                    | <ul style="list-style-type: none"> <li>Various heavy equipment and trucks to transport personnel, and/or for clearing, excavating, loading and delivery.</li> </ul>                                                                                                                                                       | MoTI, Private                                                                                                     |



## **Annex J: Impact Assessment Template**

*To be developed in 2015/2016 planning cycle*

## **Annex K: Strategic and Public Messages**

Public messages that are to be used by provincial agencies are listed below. Local authorities will need to adapt these messages to suit their needs.

### **1. General messages that apply at provincial, regional and local levels:**

- We are in the initial hours following this catastrophic earthquake. We do not have all of the specifics on damages and injuries but continue to work with first responders to gather details. We will communicate this information to you as soon as possible.
- We are continuously gathering information and talking to each other.
- Plans are in place.
- Those plans have been activated and we are responding as quickly as we can.
- People are supporting one another.
- The Province is providing leadership and information and a continuous flow of public information is taking place.

### **2. Other provincial messages:**

- Our response priorities, in order of importance, are to:
  - i. Provide for the safety and health for all responders;
  - ii. Provide access to the impact area for responders;
  - iii. Provide basic life necessities of shelter, water food and emergency health-care to those in the impact area;
  - iv. Maintain law, order and security;
  - v. Prevent additional injuries and casualties from secondary hazards related to the earthquake shaking, and
  - vi. Preserve governance.
- This provincial response is guided by Cabinet and led by the Premier and includes all ministers with responsibilities related to the earthquake. Senior officials from a variety of government ministries belong to the Ministers and Deputies Emergency Committee (MDEC). This group advises Cabinet and carries out decisions made by the Premier and Cabinet.
- The overall response is being led by Emergency Management BC via the Provincial Emergency Coordination Centre located in Victoria. EMBC is working with local authorities and First Nations, first responders, critical utilities providers and other key agencies and organizations that still have the capacity to operate within the impact areas.
- During times like this we realize fellow Canadians will want to reach out and help those in need. Here is what you can do to ensure timely and coordinated assistance is received by earthquake survivors:
  - Donate funds to established charities and volunteer organizations
  - Volunteer with emergency assistance and response organizations, such as the Salvation Army, Canadian Red Cross and other community organizations

- Do not self-dispatch or travel to the affected area unless you are an affiliated volunteer responding to an assignment from the volunteer organization from which you are affiliated.
- Don't attempt to send unsolicited goods.
- Donate through our donations management system. It will be ready to receive donations in the coming days.

### 3. Additional and situational information:

- [INSERT Message updated frequently to provide information about the response]
- [INSERT Message updated frequently to provide information about situation]

### 4. General Earthquake Messages

- A catastrophic earthquake has occurred in the region of XX.
- We are working with our partners from Natural Resources Canada to better define the size and location of the earthquake, and determine seismic specifics such as the magnitude and location of the epicenter.
- *(Note: If earthquake has occurred offshore only)* We are working with our partners at the National Tsunami Warning Center to determine the risk of a tsunami.
- We are also in contact with emergency and community officials in the impact area and we're working to identify any effects or needs; however, we have none to report just yet.
- A formal update will be provided at XX am/pm. In the interim, we will continue to share what we know via our online channels at Emergency Info BC.
- Our thanks to the media for helping to provide public safety information. The most critical message to be shared with people in the impact area is to "Remain vigilant – once the shaking stops the danger is not necessarily over".
- \*If you felt shaking and are on or near the shore, move to higher ground immediately as a tsunami may have been generated (\*NOTE: Only use for earthquakes that are felt on the coast).
- Expect aftershocks. Each time you feel the earth shake, drop, cover and hold on. When the shaking stops, count to 60 before getting up, giving loose objects time to settle.
- Keep phone lines and cell networks clear unless a life is in danger. Do not call 911 to report the earthquake. Phone lines will clog with increased call volume – please keep the lines available for emergency use only.
- Police, fire and ambulance personnel will respond to the most serious incidents first.
- Try to remain calm and assist others where possible, but do not move seriously injured people unless they are in imminent danger of further harm.

### 5. Safety Messages

#### Stay Clear

- This is a special earthquake safety message from Emergency Management BC.
- There's been a strong earthquake in our area and the danger may not be over. Stronger shaking is possible.
- Unless you believe the building you're in is unsafe, you are advised to stay inside.

- If shaking starts again, stay clear of windows and take cover under a sturdy piece of furniture or crouch near an inside wall.
- Cover your head and neck with your arms until the shaking stops.
- If an aftershock begins when you are outdoors, stay in the open and away from buildings, signs, and overhead wires.
- If you are in a tsunami hazard zone, wait for shaking to stop and immediately move inland or seek higher ground.
- Follow the instructions provided by emergency personnel, and monitor information sources for additional information.
- And stay tuned to this station for more information from Emergency Management BC.

### **Flashlights**

- This is a special earthquake safety message from Emergency Management BC.
- A strong earthquake has hit the area. It is vital to your safety to check around you for damage, especially to utility lines and connections to appliances.
- If you smell smoke or hear or smell leaking gas, open your windows and get everyone out of the building right away.
- If you suspect a gas leak is occurring, do not touch or use electric light switches. Use flashlights only—never use matches, lighters, or candles, as a spark or open flame could start a fire or even cause an explosion.
- And stay tuned into this station for more information from Emergency Management BC.

### **First Steps At Home**

- This is a special earthquake safety message from Emergency Management BC.
- A strong earthquake has hit the area. If you're at home, these are the first steps to take:
- Check on the location and status of your family members.
- Use a fire extinguisher to put out small fires. Never use water on electrical or gas fires. If a fire can't be controlled quickly, evacuate the building right away.
- Check for gas leaks. If you smell or hear gas, open the windows and move everyone outside.
- Look and listen for any signs of possible collapse by inspecting your home's foundation, walls and chimney.
- If your home is in a tsunami hazard zone, do not return to the area until emergency officials indicate it is safe to do so. And stay tuned to this station for information Emergency Management BC.

### **Second Steps At Home**

- This is a special earthquake safety message from Emergency Management BC.
- If you're in a safe place right now, stay there! The earthquake danger may not be over yet and strong aftershocks are possible. In addition:
  - If you are at home and there are no immediate signs of building collapse, fires, or gas leaks, begin to check all your utility connections.
  - Turn off any appliance that was on when the earthquake hit and check it for damage.

- Check your water heater. If the earthquake caused it to fall over it may have broken a gas, electric, or water line.
- If your utilities appear damaged, turn them off at the main source.
- Stay tuned to this station for more information from Emergency Management BC.

### **More Steps At Home**

- This is a special earthquake safety message from Emergency Management BC.
- Although earthquake shaking may have stopped, strong aftershocks are still possible in the area.
- If you are safe where you are, remain there and do the following:
- Help the people around you....your family, neighbours and coworkers.
- Clean up flammable liquids and other hazardous materials.
- Keep an eye out for any fires that might ignite.
- If you must move from your current location, leave a note on the front door of your home to alert family and emergency workers about where you have gone.
- Stay tuned to this station for more information from Emergency Management BC.

### **On The Road**

- This is a special earthquake safety message from Emergency Management BC.
- An earthquake has hit the area and stronger shaking could follow.
- If you are in a tsunami hazard zone and have felt an earthquake, immediately move inland or seek higher ground. If roads or bridges are damaged, or there is heavy traffic, leave the area on foot.
- It's safer to not drive on roads right now...but if you must drive and another earthquake strikes, pull over and stop at the first open, safe place you can find. Avoid all underpasses, power lines, overhanging signs and rock slopes.
- If stopped and in a safe location away from hazards, stay inside your car.
- If driving on a bridge or an overpass, carefully continue moving until you're off the bridge....then look for a safe, open place to stop until the shaking passes.
- When present, follow the directions of traffic control authorities.
- Avoid activated Disaster Response Routes due to anticipated extensive and priority use by emergency responders.
- Stay tuned to this station for more information from Emergency Management BC.

### **People Check**

- This is a special earthquake safety message from Emergency Management BC.
- Police, firefighters and medics are currently dealing with the most urgent problems, so the best source of help for your family, friends, and neighbours right now is you!
- If your area has suffered damage, check on other people nearby....your family, neighbours, or co-workers.
- Small children and seniors will need special attention and reassurance, even if they seem OK. People with access and functional needs may also need extra help.
- Stay tuned to this station for more information from Emergency Management BC.

### **Food**

- This is a special earthquake safety message from the Emergency Management BC.
- Following an earthquake, a hot meal can help everyone feel calmer.
- It's never too early to start feeding people, but plan your meals carefully. If your power is out, eat any perishable foods in your refrigerator first....then the food from your freezer. Leave the food that is stored on your shelves for last.
- Unless you are sure your gas and electric connections are safe, cook outside on a barbecue, a charcoal grill, or a camping stove. (Remember to use grills outdoors only.)
- And stay tuned to this station for more information from Emergency Management BC.

### **Water Storage**

- This is a special earthquake safety message from Emergency Management BC.
- If your neighbourhood has suffered earthquake damage, try to store water now for later use. Start by filling your bathtub and any other large containers.
- If your water heater is undamaged, the water inside may be needed later for drinking and cooking. If the water in the storage tank of your toilet is clear, it may be usable, but don't ever use water from the bowl.
- Prepare to disinfect any water that isn't bottled. You can disinfect water by boiling it for one minute at a rolling boil....or by adding eight (8) drops (1/8 teaspoon) of fresh, unscented household laundry bleach per gallon of clear water; or 16 drops (1/4 teaspoon) per gallon of cloudy water, mix thoroughly and allow to stand for 30 minutes before using. A chlorine-like taste and odor will result and is an indication of adequate disinfection.
- Stay tuned to this station for more information from Emergency Management BC.

### **No Phones**

- This is a special earthquake safety message from Emergency Management BC.
- There's been a large earthquake in the area and strong shaking from aftershocks is still possible.
- Local police and fire departments are aware of the situation and are busy responding to the most serious problems first.
- Please do not make telephone calls...including cell phone calls...unless you need to report a life-threatening injury or fire. Unnecessary calls could keep life-saving calls from getting through for those most in need.
- Do not text emergency responders through 911; they cannot receive text messaging.
- And stay tuned to this station for more information from Emergency Management BC.

### **Checklist – To Do's**

- This is a special earthquake safety message from Emergency Management BC.
- If the earthquake has damaged homes, roads, or other facilities in your neighbourhood, here are some things to do:
- Stay calm and reach out to people around you.

- Stay off the telephone.
- Put on sturdy shoes.
- Store water in a bathtub or large container and sterilize any water that is not bottled.
- Turn off leaking gas and damaged electric utilities at the meters.
- Clean up broken glass, medicines, and flammable liquids.
- Also, every hour or so, take a few moments to rest and think about what you are going to do next.
- And be sure to stay tuned to this station for more information from Emergency Management BC.

#### **Checklist – Don'ts**

- This is a special earthquake safety message from Emergency Management BC.
- If homes and facilities have been damaged in your neighbourhood, here things you should not do:
- Do not turn off your gas at the meter unless you actually smell gas or see smoke. If you do turn off your gas, don't turn it back on again. Wait for utility service technicians to help you.
- Do not use matches, lighters, or candles until you are certain that there are no gas leaks.
- Do not use the telephone.
- Do not waste water.
- Do not visit the disaster area. This will allow first responders to help those in need.
- Know that strong aftershocks can happen at any time.
- Stay tuned to this station for more information from Emergency Management BC.

#### **Status Message**

- {Describe incident impacts and critical damage areas.}
- Provincial and local responders are mobilized; Federal assets have been notified and are awaiting requests for assistance.
- Continuing assessments of the incident's impacts are underway and updates will follow.
- Use personal survival kits and put in place your personal emergency plans to sustain yourself, your family and your neighbours.

#### **Shelter Message**

- If you do not have to leave, stay where you are and remain calm.
- If you must seek shelter, shelters have been setup at {insert mass shelter locations}.
- For more information, listen to radio {enter stations here} for general emergency notifications and updates.

#### **Special Message to Emergency Responders**

- Report to duty if you are able to do so.
- Use text messaging when possible to communicate with family members, as phone service may be interrupted for extended periods of time.

#### **Pets and Livestock Message**

- If you have pets, please keep them with you. Do not release your pets or livestock.

- There is limited or no medical support for pets and livestock at shelters; some vets are on site at the following locations: {Locations of medical sites with veterinary care}.

### **Operations Message**

- Emergency service and rescue operations are underway.
- {Provide contact information and procedures for survivors to obtain emergency assistance, if it is needed.} {Focus on success/human interest stories, but provide realistic and accurate estimates of incident impacts.}
- Operations to repair local infrastructure, roads, utilities, etc., are also underway. {Indicate that local, provincial, and federal repair are being mobilized to disaster sites to provide assistance and how resources are being employed. Report success stories and the addition of any new capabilities as they become available. Provide estimates on when services will return.}
- {Provide details on operations underway to provide for basic life-sustaining needs (water, food, shelter, energy/power and waste removal).}
- Programs and plans are in place to assist businesses and homeowners. {Provide information on where property owners can get assistance/support for claims and repair services.}
- If you would like to volunteer to help or donate in-kind donations, visit the Red Cross website at [www.redcross.ca](http://www.redcross.ca)

### **Ongoing Operations Messages**

- {Cover what emergency services and rescue operations are ongoing. Focus on success and human interest stories.}
- {Cover how response operations are providing life-sustaining supplies and services (water, food, shelter, alternate energy sources and waste removal). Focus on success and human interest stories. Provide information on how outside organizations and people can help.}
- {Cover how response efforts to repair local infrastructure, roads, utilities, etc., are ongoing. Provide information on plans to restore services and estimates on when basic services will return.}
- {Provide information on how response organizations are assisting property owners. Report types of assistance and amount of aid available to property owners and businesses from private and government programs.}

### **Message for Volunteers**

- Do not self-dispatch or travel to the affected area unless you are an affiliated volunteer responding to an assignment from the volunteer organization with which you are affiliated.

### **Social Media:**

- Significant #earthquake felt in parts of #BC. STAY TUNED/LISTEN TO LOCAL TV/RADIO FOR MORE INFO #BCearthquake
- Be aware of aftershocks. If u feel one, drop, cover & hold on. Stay put until shaking stops #BCearthquake
- Stay tuned: #BC emergency officials are working with local governments #BCearthquake



- Stay calm. Follow all instructions from local officials #BCearthquake
- Only call 911 to report injuries or emergency situations. Do not call to report #BCearthquake
- If you felt #BCearthquake, register with @CANADAquakes at <http://ow.ly/f8RoN> Don't clog phone lines unnecessarily

**Key Links:**

- Earthquakes Canada/NRCan: <http://ow.ly/gaHtS>
- GSC Pacific (Sidney): <http://ow.ly/gaHzj>
- USGS: <http://ow.ly/gaHFF>
- EMBC Earthquake information page: <http://ow.ly/m0orF>
- Local governments and EOCs

**Key Partner Feeds:**

@CANADAquakes

@quakelist

@NWS\_NTWC

NOTE: Follow and RT info shared via local government feeds (if active/applicable).

## **Annex L: List of Acronyms**

**AANDC:** Aboriginal Affairs and Northern Development Canada

**ADM:** Assistant Deputy Minister

**AEMA:** Alberta Emergency Management Agency

**AERP:** Alberta Earthquake Response Plan

**APEGBC:** Association of Professional Engineers and Geoscientists of British Columbia

**BC:** British Columbia

**BCAS:** British Columbia Ambulance Service

**BCCS:** British Columbia Coroners Service

**BCEMS:** British Columbia Emergency Management System

**BCP:** Business Continuity Plan

**BOABC:** Building Officials Association of British Columbia

**BNR:** Burlington Northern Railway

**CANUS CAP:** Canada-United States Civil Assistance Plan

**CASARA:** Civil Air Search and Rescue Association

**CBP:** United States Customs and Border Protection

**CBSA:** Canada Border Services Agency

**CCEMO:** Canadian Council of Emergency Management Organizations

**CCG:** Central Coordination Group

**CD:** Communications Director

**CI:** Critical Infrastructure

**CIR:** Critical Information Requirement

**CN:** Canadian National Railway

**COP:** Common Operating Picture

**CP:** Canadian Pacific Railway

**CPOD:** Community Points of Distribution

BC Earthquake Immediate Response Plan

**CRC:** Canadian Red Cross

**CRD:** Capital Regional District

**CTL:** Central

**DFATD:** Department of Foreign Affairs, Trade and Development

**DND:** Department of National Defence

**DRR:** Disaster Response Route

**EM:** emergency management

**EMBC:** Emergency Management British Columbia

**EMMA:** Emergency Management Mutual Aid Agreement

**EOC:** Emergency Operations Centre

**EPA:** Emergency Program Act

**ERUs:** Emergency Response Units

**ESS:** Emergency Social Services

**FACTs:** Field Assessment Coordination Teams

**FERP:** Federal Emergency Response Plan

**FM:** frequency modulation

**GC:** Government of Canada

**GCPE:** Government Communications and Public Engagement

**GoA:** Government of Alberta

**GOC:** Government Operations Centre

**HC:** Health Canada

**HECC:** Health Emergency Coordination Centre

**HP:** Health Portfolio

**HUSAR:** Heavy Urban Search and Rescue

**ICP:** Incident Command Post

**ICS:** Incident Command System

**ID:** identification

**IDCBC:** Integrated Disaster Council of British Columbia

**IGO:** Intergovernmental Organization

**INSARAG:** International Search and Rescue Advisory Group

**IPREM:** Integrated Partnerships for Emergency Management

**IRP:** BC Earthquake Immediate Response Plan

**JIC:** Joint Information Centre

**JOA:** Joint Operations Area

**JRCC:** Joint Rescue Coordination Centre

**JTFP:** Joint Task Force Pacific

**LMS:** Logistics Management System

**LOA:** letter of agreement

**M-DEC:** Ministers-Deputies Emergency Committee

**MERCC:** Marine Emergency Response Coordination Centre

**MOC:** Ministry Operations Centre

**MoTI:** Ministry of Transportation and Infrastructure

**MOU:** memorandum of understanding

**MSAT:** mobile satellite telecommunications

**NEA:** Northeast

**NERS:** National Emergency Response System

**NOTMARS:** Notice to Mariners

**NOTSHIPS:** Notice to Ships

**NRCan:** Department of Natural Resources Canada

**NSA:** National Staging Area

**NWE:** Northwest

**OFC:** Office of the Fire Commissioner

**OIC:** Order in Council

**PAHO:** Pan American Health Organization

**PCT:** Provincial Coordination Team

**PECC:** Provincial Emergency Coordination Centre

**PENS:** Provincial Emergency Notification System

**PERRC:** Provincial Earthquake Response and Recovery Centre

**PHAC:** Public Health Agency of Canada

**PHSA:** Public Health Services Authority

**PIO:** Public Information Officer

**PMV:** Port Metro Vancouver

**PNEMA:** Pacific Northwest Emergency Management Arrangement

**PREOC:** Provincial Regional Emergency Operations Centre

**PS:** Public Safety Canada

**PSA:** Provincial Staging Area

**RCMP:** Royal Canadian Mounted Police

**RD:** Regional Director

**RFA:** Request for Federal Assistance

**ROC:** Regional Operations Centre

**RSA:** Regional Staging Area

**RTMC:** Regional Transportation Management Centre

**SAR:** search and rescue

**SEA:** Southeast

**SWE:** Southwest

**TC:** Transportation Canada

**UHF:** ultra-high frequency

**U.S.:** United States

**VAN:** Greater Vancouver area

**VHF:** very high frequency

**VIC:** Greater Victoria area

**VIP:** Very Important Person

**VIR:** Vancouver Island Region

**WHO:** World Health Organization

**YCD:** Nanaimo Airport

**YKA:** Kamloops Airport

**YLW:** Kelowna Airport

**YQQ:** Comox Airport

**YVR:** Vancouver International Airport

**YXC:** Cranbrook Airport

**YXS:** Prince George Airport

**YXX:** Abbotsford Airport

**YYJ:** Victoria International Airport

**YZT:** Port Hardy Airport

## Annex M: Glossary

### Glossary

**affiliated volunteers:** Individuals who have completed prerequisites to be officially recognized by and have registered with a recognized agency or organization.

**aftershocks:** Secondary tremors that may follow the largest shock of an earthquake sequence. Such tremors can extend over a period of weeks, months, or years. Aftershocks are formed as the crust around the displaced fault plane adjusts to the effects of the main shock.

**British Columbia Emergency Management System:** An emergency management system founded on the principles of the Incident Command System. BCEMS is required to be used by all ministries and Crown Corporations and cross-jurisdictionally in BC.

**business continuity:** An ongoing process supported by senior management and funded to ensure that the necessary steps are taken to identify the impact of potential losses and maintain viable recovery strategies, recovery plans and continuity of services.

**Canadian Council of Emergency Management Organizations:** The council is comprised of senior government officials responsible for emergency management within each of the 10 provinces and 3 territories. Its purpose is to increase the collective and individual resilience within each of their jurisdictions through prevention, mitigation, preparedness, response and recovery.

**catastrophic earthquake:** An earthquake causing extraordinary levels of mass casualties, damage or disruption severely affecting the population, infrastructure, environment, economy, and government functions. The impact almost immediately exceeds the resources normally available to local, provincial and private sector authorities in the impacted area; could result in sustained national impacts over a prolonged period of time; and significantly interrupts government operations and emergency services to such an extent that national security could be threatened.

**Central Coordination Group:** The Provincial senior officials committee representing affected ministries and program operations devoted to public safety, as well as federal representatives and stakeholders. Its role is to ensure cross-government and multi-agency coordination and strategic and policy direction to the Director of the Provincial Emergency Coordination Centre.

**Contingency Plan PANORAMA:** Canadian Armed Forces Joint Task force Pacific's response plan for a catastrophic earthquake in Southwest British Columbia or Southern Vancouver Island area.

**continuity of government:** The principle of establishing defined procedures that allow a government to continue essential operations/functions in the event of a catastrophic emergency.

**Continuity of Operations:** The initiative that ensures that agencies are able to continue operation of their essential functions under a broad range of circumstances including all hazard emergencies and national security emergencies.

**Community Points of Distribution:** Location where the public goes to pick up emergency supplies following a disaster. The need for a Community Point of Distribution (CPOD) is based on lack of infrastructure to support normal distribution of food, water, or other supplies. The local authority determines the need for, the staffing of, the location of and the commodities to be distributed at the CPOD.

**common carrier systems:** Refers to systems of telecommunications internet service providers that are regulated by the Canadian Radio-television and Telecommunications Commission.

**common operating picture:** A single understanding of the relevant information about the emergency situation shared by more than one operational element.

**convergent volunteers:** Individuals who spontaneously offer their help during a disaster and are not registered or affiliated with traditional or recognized nongovernmental volunteer organizations, nor are they impressed into service by someone of authority.

**critical infrastructure:** The processes, systems, facilities, technologies, networks, assets and services essential to the health, safety, security or economic well-being of Canadians and the effective functioning of government.

**critical resources:** Resources deemed critical to the response which are controlled by the Province.

**critical transportation routes:** Multi-modal routes to and from staging areas within the Greater Vancouver or Greater Victoria areas.

**damage assessment:** A report on the extent of damage caused by an event.

**debris:** The remains of something broken down or destroyed.

**debris dams:** A natural damming of a river by some kind of mass wasting: landslide, debris flow, rock avalanche or volcano.

**Disaster Response Route:** A route temporarily prioritized for the movement of emergency resources which will be coordinated regionally in the impact area, as required.

**earthquake:** Ground shaking and radiated seismic energy caused most commonly by sudden slip on a fault, volcanic or magmatic activity, or other sudden stress changes in the Earth.

**emergency lodging:** Either an emergency shelter or medium term lodging.

**Emergency Management Mutual Aid Agreement:** An inter-jurisdictional Memorandum of Understanding to promote and facilitate emergency management assistance between each of the provincial and territorial members of the Canadian Council of Emergency Management Organizations

**Emergency Operations Centre:** The physical location at which the coordination of information and resources to support domestic incident management activities normally takes place. An EOC may be a



temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction.

**emergency shelter:** A place for people to seek safety and live temporarily when they cannot live in their normal residence due to a specific type of situation, such as natural or man-made disaster. This is the shortest period of time, typically ranging up to three to six months maximum. Shelter is most often a shared, congregate service, and is always considered transitional.

**Emergency Social Services:** Short-term assistance to British Columbians who are forced to leave their homes because of fire, floods, earthquakes or other emergencies. This assistance includes food, lodging, clothing, emotional support and family reunification. In British Columbia, local authorities are responsible for planning and operating emergency responses within their jurisdictional areas, including Emergency Social Services (ESS).

**emergent volunteers:** Groups of people who come together as a result of the emergency to offer assistance in a particular area or for a particular task and are not (yet) formally affiliated with an incorporated organisation.

**epicentre:** The point on the Earth's surface vertically above the point (focus or hypocenter) in the crust where a seismic rupture originates.

**Family Reunification:** A function that facilitates the reunification of families separated by natural disasters through a combination of web-based connection sites, providing communication capacity to those affected and local follow up. Examples are the International Committee of the Red Cross Family Links ([www.familylinks.icrc.org](http://www.familylinks.icrc.org)) available through the Canadian Red Cross (<http://www.redcross.ca/what-we-do/finding-family-restoring-family-links>).

**Federal Emergency Response Plan:** The purpose of this plan is to guide a comprehensive and harmonized federal response, in conjunction with the response efforts of provinces/territories, nongovernmental organizations, and the private sector, to emergencies that require an integrated Government of Canada approach. It is the Government of Canada's "all-hazards" response plan.

**Government Operations Centre:** Provides strategic-level coordination on behalf of the Government of Canada in response to an emerging or occurring event affecting the national interest. It provides 24/7 monitoring and reporting, National-Level situational awareness, warning products and integrated risk assessments, as well as national-level planning and whole-of-government response management.

**HAZUS:** A GIS-based, nationally standardized earthquake loss estimation tool developed by the U.S. Federal Emergency Management Agency.

**immediate response:** The Immediate Response Phase comprises activities occurring from the onset of the earthquake and focuses on lifesaving, integration of leadership and coordination, logistics, and setting the conditions for a sustained, coordinated response and recovery effort.

**information management:** The collection and management of information from one or more sources and the distribution of that information to one or more audiences.

**Integrated Disaster Council of British Columbia:** A forum for a collaborative approach to enhance community disaster resiliency based on a four pillar approach to emergency management within BC. IDCBC coordinates the efforts of the many government, intergovernmental and non-government agencies engaged in disaster human consequence management to support local authority and First Nations' emergency management activities.

**Integrated Partnerships for Emergency Management:** An inter-governmental entity working to improve emergency management with all levels of government and stakeholders across Metro Vancouver area.

**Intergovernmental Organization:** An intergovernmental organization (or international governmental organization; IGO) is an organization composed primarily of sovereign states (referred to as member states), or of other intergovernmental organizations. Intergovernmental organizations are often called international organizations, although that term may also include international nongovernmental organization such as international nonprofit organizations or multinational corporations.

**intermodal transfer point:** Location where two or more modes of transportation intersect and resources or personnel are transferred from one mode to another in order to move through the logistic management system.

**Joint Information Centre:** A centralized function established to ensure an efficient and coordinated flow of information led by GCPE and co-located with the Provincial Earthquake Response and Recovery Centre (PERRC).

**Joint Operations Area:** The area identified by the Province of BC where operations will be conducted by the agencies and/or departments responding to the event.

**key transportation routes:** Key transportation routes and features that allow for access to the Greater Vancouver or Greater Victoria areas.

**key transportation infrastructure:** Transportation infrastructure vital to the social and economic survival of the region.

**liquefaction:** The process of soil and sand behaving like a dense fluid rather than a wet solid mass during an earthquake.

**Local Authority:** Under Section 1(1) of the Emergency Program Act, a local authority means:

(a) for a municipality, the municipal council,

(b) for an electoral area in a regional district, the board of the regional district, or

(c) for a national park, the park superintendent or the park superintendent's delegate if an agreement has been entered into with the government of Canada under section 4 (2) (e) in which it is agreed that the park superintendent is a local authority for the purposes of this Act.

**Logistics Management System:** The provincial supply chain system that plans, implements, and controls the efficient and effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet operational requirements.

**long-term housing:** Refers to the permanent homes that people occupy, and would not be considered interim or transitional.

**long-term recovery:** Phase of recovery that may continue for months or years and addresses complete redevelopment and revitalization of the impacted area, rebuilding and relocating damaged or destroyed social, economic, natural and built environments and a move to self-sufficiency, sustainability and resilience.

**magnitude:** A number that characterizes the relative size of an earthquake. Magnitude is based on measurement of the maximum motion recorded by a seismograph (sometimes for earthquake waves of a particular frequency), corrected for attenuation to a standardized distance.

**major earthquake:** An earthquake of either a Magnitude 7 or greater, or where the impacts are sufficient for the Province to activate the BC Earthquake Immediate Response Plan.

**Marine Emergency Response Coordination Committee** A multi-jurisdictional and private sector stakeholder group coordinating marine assets on the waterways in and around the Metro Vancouver area during emergency or security response and recovery activities The committee is co-led by Port Metro Vancouver and the Canadian Coast Guard.

**mass care:** An emergency response function coordinating congregate sheltering, feeding, distribution of emergency supplies, reunification of children and dependant adults with their parents/ guardians, first aid, psychosocial considerations, recovery transition needs, information services, and household pet/ service animal coordination. These services are offered to survivors of disasters by governments, IGO/NGOs and community organisations. Following a catastrophic incident, mass care can be provided to people by neighbours, private businesses, families or individuals. Services can thus be formally coordinated and administered by authorities, or informally provided and coordinated within communities by community members by the 'whole of community' approach.

**mass evacuation:** Movement of people away from the threat or actual occurrence of a hazard.

**medium-term lodging:** Lodging is an interim service, typically provided or utilized after the shelter stage and before the housing stage. The lodging period could begin immediately following the initial emergency response phase, but could last for several months or even years. Lodging typically includes

more private or semi-private services than shelter, but may still include some of the shared services and is also considered transitional.

**Ministers-Deputies Emergency Committee:** The Ministers–Deputies Emergency Committee (M-DEC) comprises the key ministers and deputies involved in the management of the provincial response to a damaging earthquake. The M-DEC will provide high-level policy decisions. It will also ensure the full complement of B.C. government human and material resources, from all ministries, crown corporations and agencies, are committed in support of the overall government response.

**mission critical systems:** Refers to any factor of a system (equipment, process, procedure, software, etc.) whose failure will result in the failure of business operations. That is, it is critical to the organization's "mission."

**National Emergency Response System:** The National Emergency Response System (NERS) focuses on joint Federal/Provincial/Territorial emergency management and is not activated unless a formal request for assistance from either a provincial government or the federal government is issued. Once activated, NERS supersedes other working agreements that a provincial government may have with individual federal departments. NERS positions Public Safety Canada (PS), through the Government Operations Centre (GOC), as the federal point of contact for information flow, logistics support, response coordination and decision making during an event jointly managed by federal and provincial emergency measures organizations.

**Nongovernmental Organization:** Private organizations that pursue activities to relieve suffering, promote the interests of the poor, protect the environment, provide basic social services, or undertake community development.

**operational area:** Geographic area defined for conducting or coordinating the response and recovery operations.

**Pacific Northwest Emergency Management Arrangement:** The emergency management arrangement between Alaska, Idaho, Oregon, Washington, British Columbia and Yukon Territory for cooperating during emergency events, including the provision of emergency management assistance and support if required and requested by the impacted member jurisdiction.

**plate tectonics:** A theory supported by a wide range of evidence that considers the Earth's crust and upper-mantle to be composed of several large, thin, relatively rigid plates that move relative to one another. Slip on faults that define the plate boundaries commonly results in earthquakes. Several styles of faults bound the plates, including thrust faults along which plate material is subducted or consumed in the mantle, oceanic spreading ridges along which new crustal material is produced, and transform faults that accommodate horizontal slip (strike slip) between adjoining plates.

**potable water:** Water safe enough to be consumed by humans or used with low risk of immediate or long term harm.

**preparedness:** Activities undertaken prior to an emergency to ensure an effective response to and recovery from the consequences of an emergency event.

**Provincial Coordination Team:** A cross-government provincial asset of experienced emergency managers and technical specialists with varied skills designed to be available on short notice. The PCT will be activated and deployed to the impacted area to establish and run a provincial Incident Command Post (ICP), which will be a focal point for provincial, national and international responders to provide coordinated support to local authorities.

**Provincial Emergency Coordination Centre:** The central emergency operations centre activated to provide overall coordination of the integrated provincial response to an emergency or disaster. The Provincial Emergency Coordination Centre manages the overall provincial government response, which includes the provision of support for the regional levels. This may include consultation with senior elected officials, management of emergency information for the public, resource coordination and policy guidance. Communications and collaboration with external agencies such as crown corporations, federal emergency response agencies, IGO/NGOs and other provinces are managed at the Provincial Central Coordination level.

**Provincial Earthquake Response and Recovery Centre:** The Provincial Earthquake Response and Recovery Centre (PERRC) may be established when the scope of an emergency, the scale of response, and complexity of the event requires extensive cross-agency integration and coordination for an extended period of time. The PERRC is not a pre-established facility, but one that will be determined during the immediate response phase and established in a location to provide the best effect then activated during the sustained response phase.

**Provincial Regional Emergency Operations Centre:** The Provincial Regional centre responsible for coordinating regional response activities, supporting local authority Emergency Operations Centres (EOCs), assigning regional (provincial and federally assigned) critical resources, providing regional messaging, and providing situational understanding to the PECC/PERRC.

**psycho-social impacts:** Relates to one's psychological development in, and interaction with, a social environment. Psychosocial support is an approach to victims of disaster, catastrophe or violence to foster resilience of communities and individuals. It aims at easing resumption of normal life, facilitating affected people's participation to their convalescence and preventing pathological consequences of potentially traumatic situations.

**Reception Centre:** Sites where evacuees may be received and registered during an disaster. They may be a facility such as a recreation centre, church hall, school, hotel lobby, or even a tent - it depends on what is available in the community or what is needed.

**reconnaissance:** Obtaining information by visual observation or other detection methods about the conditions of critical infrastructure and other essential facets of a particular area.

**recovery:** Refers to those measures taken to recover from an emergency or disaster and return communities to pre-emergency conditions. Recovery activities include site-restoration; the reconstitution of government operations and services; and measures for social, political, environmental and economic restoration.

**Recovery Task Force:** The Recovery Task Force – an organization identified by Cabinet – will be determined during immediate response, activated for sustained response, and responsible for leading and coordinating recovery efforts. With transition to from sustained response to recovery, the Recovery Task Force will assume leadership for overall provincial coordination.

**Regional Transportation Management Centre:** A centre that monitors, detects, controls and communicates traffic conditions in the Lower Mainland and for all provincial highways and infrastructure throughout the province. The RTMC facilitates regional data sharing and integration with municipalities and other transportation agencies to provide coordinated response during emergencies/disaster.

**regular channels:** Routine or usual lines of communication and/or reporting.

**Request for Federal Assistance:** The formal process for the Province of British Columbia to request the federal government to provide support towards the emergency response efforts.

**response:** Actions that must be carried out when an emergency exists or is imminent. Response includes immediate actions to save lives, protect property and meet basic human needs. Response measures address immediate and short-term effects of an emergency or disaster. The aim of these measures is to ensure that a controlled, coordinated and effective response is quickly undertaken to minimize its impact on public safety, environment and infrastructure. Response activities include the execution of emergency operations plans and of prevention activities designed to limit the loss of life, personal injury, property damage and other unfavourable outcomes.

**seismic retrofit:** The modification of existing structures to make them more resistant to seismic activity, ground motion, or soil failure due to earthquakes.

**situational understanding:** The continual process of collecting, analysing and disseminating intelligence, information and knowledge to identify, comprehend and process high priority information about the incident and its effects in impact areas in order to develop a common operating picture. This process allows organizations and individuals to anticipate requirements and respond effectively.

**Situation Report:** Periodic operational summaries of the disaster situation, including the status of operations, threat and geographical information, identification of operational priorities and requirements, reports on their major response and recovery activities, unmet needs, and recommended actions, as well as data on emergency social services, infrastructure and other critical information requirements.

**Staging Area:** A movement control point where resources are received, prioritized, and organized prior to deployment.

**Strategic Communications:** Refers to policy-making and guidance for consistent information activity within an organization and between organizations. Strategic communication management could be defined as the systematic planning and realization of information flow, communication, media development and image care in a long-term horizon.

**subduction zone:** “Subduction” is the process that takes place at convergent boundaries by which one tectonic plate moves under another tectonic plate and sinks into the mantle as the plates converge. A region where this process occurs is known as a “subduction zone”. Nine out of the ten largest earthquakes to occur in the last century were subduction zone events.

**surge capacity:** The ability to obtain adequate staff, supplies and equipment, structures and systems to provide sufficient capability to meet immediate operational requirements following a large-scale emergency or disaster.

**sustained response:** Characterized by defined operational periods and resources necessary to support response operations, sustained response continues until life/health issues and other critical response objectives are addressed.

**transportation node:** A node is any key location within a transportation route or network where resources, personnel or vehicles can enter or change route.

**tsunami:** An impulsively generated sea wave of local or distant origin that results from large-scale seafloor displacements associated with large earthquakes, major submarine slides, or exploding volcanic islands.

**unreinforced masonry/concrete:** A type of building where load bearing walls, non-load bearing walls or other structures, such as chimneys are made of brick, cinderblock, tiles, adobe or other masonry material, that is not braced by reinforcing beams.

**volunteers:** People who offer their services without expectation of financial compensation and are a critical component of emergency response.