

# **PORT MCNEILL EMERGENCY PLAN APPENDIX B**

**Port McNeill Tsunami Warning and Evacuation Plan  
(Complete with Appendices)**

## **TSUNAMI WARNING AND EVACUATION PLAN**

### **PART I - REFERENCES**

1. *Emergency Program Act* RSBC
2. British Columbia Tsunami Warning Plan (2008)
3. British Columbia Operational Guidelines for Evacuations
4. Town of Port McNeill Emergency Measures Bylaw No. 579, 2006
5. Port McNeill Emergency Plan
6. Port McNeill Emergency Evacuation Plan (2004)
7. Tsunami Hazard Map – Town of Port McNeill
8. Earthquake and Tsunami Smart Manual

### **APPENDICES**

Appendix A	Tsunami Warning Call Out List (Restricted)
Appendix B	Port McNeill Tsunami Hazard Map
Appendix C	Tsunami Notification Zones
Appendix D	Property Evacuation Checklist
Appendix E	Port McNeill Harbour – Tsunami Brochure
Appendix F	Public Information Brochure

### **PART II – INTRODUCTION AND BACKGROUND**

1.
  - 1.1 The historical, seismological and geological evidence on Northern Vancouver Island indicates that there is a risk of the effects of tsunamis resulting from local or offshore earthquakes.
  - 1.2 Low lying areas along the waterfront of Port McNeill will require an evacuation and warning system to protect the lives and property of residents in our community.
  - 1.3 Modeling of the effects of a Cascadia Subduction Zone earthquake suggests maximum tsunami heights for zone B (locations in Queen Charlotte Strait and the mainland inlets) will be 3 meters in height. There could be local amplification due to offshore bathymetry or coastal geometry, and run up effects could increase the maximum height by 200% or more. For the Port McNeill area, the tsunami risk is considered moderate, and the 6 meter line represents a realistic elevation for emergency planning purposes.

Source: Canadian Hydrographic Service, Fisheries and Oceans Canada.

Tsunami Hazard areas affecting Port McNeill have been identified by mapping the 5, 10, 15, and 20 meter contour elevations. Those areas at less than 10 meters above sea level are considered tsunami risk areas. Reference: Tsunami Hazard Map attached as Appendix B.

1.4 Tsunami risk areas in the Town of Port McNeill include:

- |  |                   |
|--|-------------------|
| (a) the downtown business district         | Evacuation Zone 1 |
| (b) the industrial foreshore               | Evacuation Zone 2 |
| (c) the Port McNeill harbour               | Evacuation Zone 3 |
| (d) residential areas of Beach Drive       | Evacuation Zone 4 |
| (e) Industrial area located at Beach Camp. | Evacuation Zone 5 |

1.5 The Town of Port McNeill, the Port McNeill Emergency Planning Committee, the Royal Canadian Mounted Police, and the Port McNeill Volunteer Fire Department has developed a cooperative warning system to assist residents to evacuate from the danger areas in the event of a tsunami warning.

1.6 The tsunami warning system for the British Columbia Coast is initiated by a warning broadcast issued by the (EMBC) Emergency Management BC in Victoria. The tsunami warnings are also provided directly from the (EMBC) Emergency Management BC to regular broadcast media such as radio, television and internet outlets. Also notified is the Marine Coast Guard Radio system which will broadcast tsunami warnings on Channel 16 Marine VHF and on the WX channel.

1.7 The Town of Port McNeill is located in Provincial Tsunami Notification Zone B.  
Reference: Notification Zone Map in Appendix C.

### **PART III - BC TSUNAMI WARNING SYSTEM / 2008**

#### **1. The British Columbia Tsunami Warning System (2008)**

Reference Document: The BC Tsunami Warning System (2008)

A .pdf document available for download at

<http://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery>

The Alaska Tsunami Warning Centre (ATWC) will notify the Emergency Management BC (EMBC) in Victoria of any event that may result in tsunami danger to the British Columbia Coast.

The Emergency Management BC (EMCB) in Victoria will notify emergency personnel in Port McNeill via the 9-1-1 Fire Dispatch System. This call will go directly to the Port McNeill Volunteer Fire Department and the Port McNeill Detachment of the Royal Canadian Mounted Police.

Municipal and Regional Emergency Coordinators will receive the same notification by a separate and parallel EMBC communications broadcast.

The Emergency Management BC broadcasts the following notifications to local communities of the danger:

- (a) A tsunami WARNING – There is confirmed evidence of a tsunami. Residents are strongly urged to evacuate.
- (b) A tsunami WATCH – A tsunami may have been generated, but there is not sufficient evidence to confirm or determine if there is one. Residents are advised to prepare for evacuation.
- (c) A tsunami ADVISORY – a report of a tsunami with at least 6 hours advance notice that it may impact the coast. There will be time to prepare and assess the course of action required.
- (d) Tsunami INFORMATION – no action required.
- (e) Tsunami – CANCELLATION – self explanatory
- (f) Tsunami – ALL CLEAR – self explanatory.

## **PART IV – EVACUATIONS**

### **1. General Information**

1.1 To order a mandatory evacuation, the Town of Port McNeill or the Regional District Board must declare a “State of Local Emergency” as enabled under the Emergency Program Act. Implementing the Evacuation Order would normally be conducted by the Royal Canadian Mounted Police, and persons designated to assist them.

#### **1.2 No Notice Evacuation**

This type of evacuation results from unique emergency situations that occur with little or no warning, and will be implemented on an ad hoc basis. The individual responsible for implementing this evacuation will be the Incident Commander at the scene of an emergency, with support arranged through the Emergency Operations Center. Evacuation instructions will be based on known or assumed risks associated with the hazard. A tsunami warning with a short time frame may result in a “no notice evacuation”.

#### **1.3 Pre-Planned Evacuations:**

The authority to order an evacuation lies with the elected representative of the local authority – i.e. Mayor and Council for Port McNeill. A consistent format and process will alert the population at risk in 3 stages by:

- (a) an Evacuation Alert
- (b) an Evacuation Order
- (c) All Clear

### **2. British Columbia Emergency Response Management System (BCERMS)**

Warnings and evacuation management will follow the principles of the British Columbia Emergency Response Management System based on the *Incident Command System*.

### **3. Personal Preparedness and Public Information**

3.1 The Town of Port McNeill acknowledges the vulnerability of our community to the effects of tsunamis. A program of public awareness through workshops, training and other means of public information will be implemented. The Town of Port McNeill encourages residents to

take personal responsibility for preparing and planning for emergencies, evacuations and maintaining personal emergency supplies.

3.2 Information on personal preparedness is available to residents by contacting the Town Office or the Municipal Emergency Coordinator.

#### 4. Training and Orientation

The Municipal Emergency Coordinator is responsible for the training and orientation of the Port McNeill Tsunami Warning and Evacuation Plan. Orientation and training will be provided to:

Elected Officials  
RCMP Port McNeill  
Port McNeill Volunteer Fire Department  
British Columbia Emergency Health Service (BCEHS)  
Vancouver Island North Search and Rescue  
Port McNeill Hospital Staff  
The general public.

## PART V – CONCEPT OF OPERATIONS

### 1. CONCEPT OF OPERATIONS

1.1 The concept of the Town of Port McNeill Tsunami Warning and Evacuation Plan is to assign police, fire fighters and designated emergency service volunteers to attend to the hazard risk areas and provide personal notification to residents and businesses that a tsunami danger exists. Telephone notifications will also be arranged through staff at the Emergency Operations Center.

1.2 An air horn or warning siren at the Harbour Manager's Office will be activated if possible.

1.3 Upon receiving the tsunami hazard notification, residents will be asked to leave the danger area and proceed to a safe zone – an area at least 6 meters above sea level.

1.4 The designated evacuation and reception centre will be the North Island Secondary School (NISS) located at 2071 McNeill Road, Port McNeill. This Reception Centre will be staffed and operated by the Emergency Social Services (ESS) group. Registration of evacuees will take place here.

1.5 Transportation assistance will be provided for those who need it.

1.6 Evacuees should remain at the reception centre until the "all clear" signal is received from the Emergency Management BC (EMBC). Evacuees will be informed when it is safe to return to their homes and businesses.

#### 1.7 Provincial Evacuation Policy

It is the policy of the Province of British Columbia that no one will be forced from their homes. Regardless of whether an Order for Evacuation has been issued or not – adult residents of an evacuation area may refuse to leave by their own choice. Emergency

evacuation personnel should advise the Emergency Operations Center of these circumstances if encountered.

*Exception: Children under the age of 19 years (18 and under) are not adults and cannot make the choice. Provincial child protection legislation requires that children 18 years of age and under who are deemed to be in danger can be taken into custody by an authorized officer such as a police officer or Child Protection Worker from the Ministry of Human Resources.*

Emergency personnel who encounter this situation must inform their supervisors immediately for instructions before taking any action.

## **2. PORT MCNEILL HARBOUR – EVACUATION AND SAFE ZONE**

2.1 Boating visitors to Port McNeill Harbour will not likely have access to a vehicle to assist in evacuating from the harbour area.

2.2 In the event of an evacuation notice, visitors staying on board vessels moored in the harbour will be directed to leave the harbour area on foot, and go directly to a SAFE ZONE. Reference: Port McNeill Harbour Tsunami brochure Appendix “E”. Safe zones near the harbour will be:

- (a) Dalewood Inn parking lot
- (b) Shoprite Store parking lot

Transportation from the safe zone to the evacuation/reception centre at the North Island Secondary School will be arranged by the Emergency Operations Center.

## **3. ROLES AND RESPONSIBILITIES**

3.1 Under the Incident Command System, the Port McNeill RCMP and the Port McNeill Volunteer Fire Department will establish a Unified Command for the implementation of tsunami warnings and evacuations to residents of Port McNeill.

### 3.2 Royal Canadian Mounted Police

Is the lead agency in implementing notifications and the evacuation of people from the hazard zone.

Incident Command  
Maintenance of law and order.  
Provides warning and alerting services.  
Provides traffic control.

### 3.3 Port McNeill Volunteer Fire Department:

Will provide assistance in the notification and evacuation of people.  
May provide emergency medical aid in cooperation with British Columbia Emergency Health Service. (BCEHS)

Provides fire suppression and fire control.  
Provides rescue services.

Assists in traffic control.

3.4 British Columbia Emergency Health Service (BCEHS) – Port McNeill Unit

On the receipt of a tsunami warning and evacuation notice, the British Columbia Emergency Health Service will attend to the Evacuation/Reception Centre at the North Island Secondary School. The ambulance unit will remain there unless needed for direct emergency response somewhere else. Page out via 9 – 1 – 1. To be called out by EOC.

3.5 Vancouver Island North Search and Rescue (VINSAR)

SAR may assist the police and fire department in conducting house to house evacuation notifications.

## **PART VI – OPERATIONAL GUIDELINES**

1. Notification

The British Columbia Tsunami Warning System provides that the Emergency Management BC (EMBC) will notify North Island communities through their Fire Departments via the 9-1-1 Fire Dispatch System. The Royal Canadian Mounted Police, Coast Guard Radio and public broadcast media will be notified simultaneously.

2. Assumptions

- 2.1 With public broadcast media being advised of tsunami warnings at the same time as emergency management officials, the public will have access to the same basic information as emergency managers.
- 2.2 When there is sufficient warning of a threat, spontaneous evacuations will occur. Between 5 and 20 percent of the people will evacuate before being directed to do so.
- 2.3 Some people will refuse to evacuate regardless of the threat.
- 2.4 Some owners of companion animals will refuse to evacuate unless arrangements have been made to care for their animals.
- 2.5 Roughly 10-20 percent of the population at risk will require assistance in a reception centre or group lodging facility. Many evacuees will seek shelter with relatives, friends or motels rather than use government-provided facilities.

3. Evacuation Checklist

*Note #1 Earthquakes that generate tsunamis may occur well offshore. In those cases there may be several hours in which to develop and carry out warning and evacuation procedures.*

*Note #2 Earthquakes that result in tsunamis generated near Vancouver Island may result in little or no warning being given, with no time to implement an evacuation plan.*

3.1 Initial Report

*Responsible: RCMP/PMVFD*

- On receipt of a tsunami notification, determine its nature - is it a WARNING, a WATCH or an ADVISORY? This will determine your actions and response priorities, and how much time you have to work with.

- Confirm that the affected area in the notification applies to Tsunami Notification Zone B – in which Port McNeill is located. If the notification does not include this community, you may not have to take any direct action.

### 3.2 Evacuation is considered

*Responsible: RCMP/PMVFD*

- Establish Incident Command. In British Columbia the RCMP are designated as responsible for evacuation operations. The incident commander will be a member of the Port McNeill RCMP Detachment.
- Establish Unified Command immediately. Affected agencies will be the RCMP, PMFVD and VINSAR.
- Call the key personnel as listed in Appendix “A” – the Call out List. Inform them of the tsunami notification, and request immediate attendance to the Emergency Operations Center at the Municipal Office. Administrative Support staff may be required to ensure all the calls are made in a short time frame.
- Key personnel to be notified are:
  - A. Mayor or designate
  - B. Council members
  - C. Chief Administrative Officer
  - D. Municipal Emergency Coordinator
  - E. Harbour manager
  - F. Emergency Social Services Director
  - G. Public Works Superintendent
  - H. RCMP Commander
  - I. Fire Chief

### 3.3 Evacuation Decision

*Responsible: Mayor and Council*

- Reference: Town of Port McNeill Emergency Measures Bylaw 579, 2006
  - Mayor will convene an emergency meeting of the Port McNeill Emergency Executive Committee, and on available information and advice, will make a decision to authorize the implementation of the Port McNeill Tsunami Warning and Evacuation Plan.
  - The Mayor, Acting Mayor, Municipal Emergency Coordinator, Mount Waddington Regional District Emergency Coordinator or other person so designated can authorize the call out activation of the emergency plan.
  - To order a mandatory evacuation, an Evacuation Alert and an Evacuation Order can only be made by the local authority. In Port McNeill, the local authority is the Mayor and Council.
  - This authority cannot be delegated.
  - Time constraints or other factors may require this decision making process to be done by telephone or radio rather than physically convening a meeting.
  - The decision to implement the Tsunami Warning and Evacuation Plan will result in the starting of the call out and evacuation process.



- The Port McNeill Emergency Executive Committee will decide whether to declare a State of Local Emergency only if it is necessary to invoke the powers delegated by the Emergency Program Act. *Note: it is not necessary to declare a Local State of Emergency to implement the Plan – the declaration is only required if extra-ordinary powers are required.*
- Identify the Information Officer to be the official spokesperson for the Town of Port McNeill. This person will be assigned to the Emergency Operations Center.
- Identify and confirm the Emergency Operations Center Director. This is usually the Chief Administrative Officer.

#### 3.4 Evacuation is Ordered

*Responsible: Incident Commander  
Responsible: EOC Director*

- With the assistance and support of the Emergency Operations Center, proceed with the call out list in Appendix “A” to implement the warning and evacuation plan.
- Only those properties shown as being at 6 meters or less above sea level will be subject to the Evacuation Order. Reference: Appendix “B”.
- Use the Property Evacuation Checklist in Appendix “D” to establish objectives for the warning and evacuation plan.
- Assemble at least 5 teams of at least 2 persons to be sent to each one of the 5 Evacuation Zones as designated in the Warning and Evacuation Plan. Designate the Team Leader.
- Maintain an Incident Log
- Notify the Director of Emergency Social Services to begin the setting up of an Emergency Reception Centre at the North Island Secondary School.

#### 3.5 Establish Emergency Operations Center

*Responsible: EOC Director*

- The Emergency Operations Center will be set up in the Municipal Hall at 1775 Grenville Place, unless otherwise indicated.
- Immediately set up the Information Officer with a public information telephone line to handle incoming calls from the public who will be asking for confirmations and directions regarding the tsunami warning.
- Establish the necessary communications links with the Incident Commander and Emergency Social Services staff at the reception centre.
- Provide the necessary support for the Incident Commander and the Emergency Social Services Director to carry out his/her duties.
- Manage the Emergency Operations Center in accordance with BCERMS principles and practices.
- Maintain Incident Log

- In the event of an actual tsunami causing property damage, institute the full Port McNeill Emergency Plan.

○

### 3.6 Emergency Social Services

*Responsible: ESS Director*

- Set up an Emergency Reception Centre at the North Island Secondary School at 2071 McNeill Road, Port McNeill.
- Follow set up procedures as per *Emergency Social Services Reception Centre Guidelines manual*.

### 3.7 Operational Considerations

*Responsible: EOC Director*

#### Public Anxiety

- Emergency managers need to be aware that a tsunami warning and subsequent evacuation procedures will result in a high level of public anxiety and confusion about what to do, and where to go. There will be a high number of calls to emergency services, 9-1-1, and the Municipal Office. Anticipate the need for accurate, timely public information and have staff available to answer requests for assistance and information.

#### Liaison with Port McNeill Hospital

- Port McNeill Hospital Staff must be notified of the Evacuation Order. Public anxiety and stress over the evacuation order may trigger stress related medical conditions requiring medical attention. This will affect workload and staffing for hospital staff.

#### Vulnerable Populations

- Evacuation coordinators must be aware that the Old School on Shelley Crescent is in the tsunami hazard zone. The Old School houses a daycare centre and specific arrangements will have to be made to evacuate the small children to the Reception Centre at NISS.

It may be prudent to evacuate the children on foot to the parking lot at 430 Pioneer Hill Road – Positive Connections North Coast Collision – which is in the safe zone. Transport to the Reception Centre can be arranged from there.

\* *obtain copy of Daycare Centre Emergency Plan as attachment*

#### Mobility Restricted Persons.

- The number of mobility restricted persons, or persons with other disabilities living in the tsunami risk zone are unknown.

#### Traffic Control

- Traffic control at affected intersections is vital to prevent congestion and confusion for evacuees. Traffic control must be established at:
  - Intersection of Broughton Boulevard and Beach Drive (CAB)
  - Intersection of Campbell Way and Broughton Boulevard
  - Intersection of McNeill Road and Broughton Boulevard (CIBC)
  - Intersection of McNeill Road and Beach Drive (Mugz)

- Traffic control will allow only vehicles and pedestrians OUT of the area. No one will be allowed INTO the evacuation zone.
- 

Transportation Coordination

- Transportation Coordination and services will be needed to move evacuees without transportation to the Reception Centre at NISS.

Beach Drive Access

- The residential area of Beach Drive has access by one road only. In the event of a local earthquake, this area may be subject to landslide, cutting off access for the residents and emergency services alike. Consider opening the locked gate at the east end of Beach Drive to allow access to Mine Road from Beach Drive. Port McNeill Public Works Foreman has a key.

Evacuation Management Capacity

- Police capacity to provide evacuation management may be limited. The Port McNeill RCMP detachment has policing responsibilities for other communities as well as Port McNeill. A tsunami warning and evacuation notice will likely affect more communities than just Port McNeill which may place constraints on staff to meet evacuation management commitments here.

Staffing Requirements

Minimum staffing requirements to implement an Evacuation Order:

Police Incident Commander	1
Fire Department Officer	1
Harbour Manager	1
Public Works Superintendent	1
Traffic Control (minimum)	4
Notification Teams (5)	10
ESS Director	1
ESS Team for Reception Centre	10
British Columbia Emergency Health Service	2
Transportation/drivers	2
EOC Staff (not including elected officials)	5
• EOC Director	
• Emergency Coordinator	
• Administrative Support	
• Finance /controller	
• Public Information Officer	
Animal Control Officer and Assistant	2
	-----
	Total 40

Estimated Number of Evacuees

The estimated number of evacuees is difficult to measure, which is dependant on the time of day or even the season of the year in which a tsunami warning is generated. Summer months will see increased numbers of tourists and seasonal visitors, particularly in the Port McNeill Harbour.

Normal business hours will have more people downtown. BC Ferries operates 0700 to 2200 hrs year round.

Based on an assumption that 80% of evacuees will stay with family or friends, leaves 20% requiring group accommodation at the Reception Centre at NISS.

<b>Residences</b>	<b>Persons</b>	<b>Total</b>	<b>% needing accommodation</b>	<b># needing group housing</b>
45	3 per residence	135	20%	27
Ferry Terminal	Estimated	25	100%	25
Visitors/Tourists	Estimated	100	100%	100
Apartments 1	25	25	20%	5
<b>Total</b>	<b>Evacuees</b>	<b>285</b>	<b>Need accommodation</b>	<b>157</b>