

# Community Emergency Plan

## Seton Portage



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## Key definitions

|               |   |
|---------------|---|
| Emergency     | An event that requires prompt coordination of actions to protect the health, safety or welfare of people, or to limit damage to property or the environment.  |
| Hazard        | A potentially damaging physical event, phenomenon or human activity that may cause the loss of life or injury, property damage, social and economic disruption or environmental degradation.  |
| Resilience    | Resilience is the capacity to adapt; by persevering, recuperating or changing to reach and maintain an acceptable level of functioning. Disaster resilience is built through empowering organizations, communities and society to share responsibility for keeping hazards from becoming disasters. |
| Risk          | The combination of the likelihood and the consequence of a specified hazard event happening.  |
| Vulnerability | Physical, social, economic and environmental factors or processes, that increase the susceptibility of a community to negative impacts from hazards. It is also a measure of how well prepared and equipped a community is to minimize impacts and cope with hazards.                               |

# Community Emergency Plan

## Seton Portage 2017

### Introduction

The SLRD Emergency Management Program provides emergency management services to the ~5,000 SLRD residents in the four Electoral Areas and partners closely with member municipalities. In addition to the Emergency Management Program, the SLRD funds and/or operates select Emergency Services in the region including:

- 9-1-1 Services
- Diking and drainage in Electoral Area D
- Fire and Rescue Services
- Wildfire Fuel Management Program.

Major emergencies and disasters are on the increase in Canada and worldwide. Disaster effects may be direct (e.g. damage to house, loss of income) or indirect (e.g. increased insurance premiums, reduced air quality due to smoke from wildfires elsewhere).

A number of communities in the SLRD are geographically isolated from traditional first responder organizations such as fire, police and emergency medical services. Communications and other infrastructure may be limited or prone to outages. The effect of this geographical separation is that communities will likely lead their own response, making community knowledge, preparation and skill building a vital aspect of emergency preparedness and increasing the resilience of these communities to adverse events.

The purpose of a Community Risk Assessment (CRA) is to guide practical steps in preparedness, response, recovery and mitigation that reduce both the likelihood of emergencies and the consequences when disaster cannot be avoided. Risk information also informs community residents, business owners, and institution managers of the hazards to expect and how best to prepare for them. Further, A CRA provides a platform from which to progress community-level emergency management and evacuation policy and planning.

A Community Action Plan (CAP) provides a blueprint for communities to increase their resilience through increasing skills, knowledge and connectedness – benefiting the community before a major emergency, during response and through the recovery process.

## Community Overview

Seton Portage (Seton) is located on an isthmus of land between Seton and Anderson Lakes some 25 kilometers west of Lillooet. Seton has a full time population of ~150, with approximately 80 Tsal'ah community residents and the balance being SLRD Electoral Area B property owners. Population fluctuates with seasonal residents in the summer months and BC Hydro operates a hydro dam at Seton with worker accommodation near the site.

Seton is exposed to a range of hazards, most notably flood and landslide events. The community is exposed to debris flow and flood events from multiple drainages above the settlement, and has experienced an increase in these incidences since 2009. Further study of the debris flow and flood hazard is currently underway as a joint project between the SLRD, Tsal'ah, INAC and EMBC and this plan will be updated as applicable based on the results of the study findings.

Additionally hazards are interface fire from surrounding woodlands and severe storm effects have the potential to threaten the community directly, but also to isolate residents if access roads become blocked. Previous wildfires have come close to the settlement and isolated storm cells affecting the area are not uncommon. Seton has no cellphone reception, and landline service may be cut by fire or storm, leaving the community with no 9-1-1 service and potentially without power.

### Demographics

Mainly fulltime residents with some seasonal occupants

### Land Use

Detached homes and recreational properties

### Critical Infrastructure

|                                |   |
|--------------------------------|---|
| Drinking Water                 | Independent wells                                 |
| Sanitary/Waste Water Treatment | Septic tanks/fields                               |
| Electrical Power Systems       | BC Hydro supply available to all residences       |
| Gas Heating Systems            | No  |
| Communications                 | Landline, internet access. No cellphone reception |

## Response Capabilities

|                         |   |
|-------------------------|---|
| Structural fire         | Trained Volunteer fire department with one vehicle.   |
| Wildland interface fire | Crews dispatched from Lillooet/Kamloops. Opportunity for more local training  |
| Medical                 | BCAS station 314 is located in Seton.   |
| Police                  | Nearest RCMP detachment in Lillooet   |
| Evacuation              | Community Evacuation Kit at the Fire Hall. Evacuation notification training conducted with members by the SLRD.   |
| Communication           | Seton VFD members trained in radio communications. Landline and internet access available, subject to any infrastructure impacts. No cellphone reception. |

# Hazard, Risk and Evacuation

## SETON PORTAGE HAZARD PROFILE

| Flood | Debris Flow/<br>Landslide | Interface Fire | Severe Storm/<br>Utility failure | Earthquake | Hazardous<br>Material |
|-------|---------------------------|----------------|----------------------------------|------------|-----------------------|
| Red   | Red                       | Red            | Orange                           | Yellow     | Yellow                |

### KEY:\*

|               |
|---------------|
| HIGH RISK     |
| MODERATE RISK |
| LOW RISK      |
| UNLIKELY      |

\*Note that risk does not equal impact. A low risk event may still occur with high impact.

The risk assessment below considers the three high and one moderate risk hazards.

## Evacuation Routes

Evacuation route is dependent on impacts and location of threat and will be determined by RCMP and first responders in conjunction with the SLRD. The recommended evacuation route will also be printed on the official evacuation notice delivered by first responders and/or published on the SLRD website

Evacuation route one: South via the Highline Road towards Pemberton at the direction of First Responders. Note that the Highline Road is 4WD drive access only, and often impassable in the winter and early spring.

Evacuation route two: East towards Lillooet via Mission Mountain Road.

## Community Muster Points:

High Ground (debris flow, flood): Sk'il Mountain School parking lot

Interface fire, storm related evacuation: Seton Portage Fire Hall parking lot

## Types of Evacuation

### Evacuation

#### Alert

This is the time to get ready to leave, putting together 'grab and go' bags with essential supplies, papers and prescriptions, and making any other arrangements to leave the property with all household members and pets. Residents may self-evacuate (voluntary) during this time, particularly if they have mobility issues or health conditions that may make it difficult to evacuate quickly. This is also the time to move livestock to safer areas.

### Evacuation

#### Order

Mandatory evacuation occurs when a population is ordered to leave a defined area according to a formal written document that outlines the impact area and why an evacuation is necessary.

### Shelter-in

#### -Place

Essentially, an instruction to the public to stay inside for safety reasons. It may also mean "seal the room", i.e. take steps to stop outside smoke or other contaminants from entering the room.

### Evacuation

#### Rescind

Formal notification that it is safe to return to the evacuated area. The affected area may still be under an Evacuation Alert under further notice, if the hazard still presents a threat.

## Flood

The flood risk for Seton is concentrated in the lower lying areas, with potential flood waters originating from Seton River, the Bear, Petes, Spyder creeks and feeder streams, and the Whitecap drainage. In terms of stream flow, the flood risk comes from both bank overtopping and an outburst flood scenario, where a collection of woody debris and rocks become lodged in one area by high stream flows, forming a barrier. The water pooling behind the barrier can rapidly cause flooding of properties nearby, but the greater hazard is from the volume of water and debris released suddenly when the temporary dam gives way.

A current study of the integrated landslide and flood risk for the Seton area is underway, and this section will be updated once that study is complete.

### **EVACUATION PROTOCOL:**

Evacuate if directed by first responders (imminent threat, tactical evacuation), and/or if an evacuation order is issued by the SLRD due to conditions being assessed as dangerous enough to warrant an evacuation of identified properties. First responders and the SLRD will take a conservative approach in assessing flood risk evacuation trigger points, to ensure resident safety.

#### **Evacuation Alert Trigger Points**

An evacuation alert would be triggered by Environment Canada, the River Forecast Centre forecasting conditions that trigger a flood watch, and/or onsite observation of those conditions.

#### **Evacuation Order Trigger Points**

Evacuate if heavy/torrential rainfall is occurring, and ANY of the following are observed:

- A flood warning is issued by the River Forecast Centre
- Sudden lack of flow in creeks during wet weather
- Landslides occurring in the general area, or sounds of landslides occurring
- Forecast rainfall is occurring, and stream full conditions are occurring or close to occurring.

## **BC Hydro Dam**

[detail to come from BC Hydro]

## **Debris Flow/Landslide**

Seton is exposed to debris flow and flood events from multiple drainages above the settlement, and has experienced an increase in these incidences since 2009. An annual build up of sediment from higher up the alluvial fans becomes saturated during substantial rainfall events, and remobilizes the sediment, which then moves downstream as a debris flow (MFLNRO, 2016). The occurrence of these heavy rainfall events has increased to become almost annual events and in any given year there is the potential for multiple such events. Previous debris flow events in 2015 and 2016 reached the back yards of properties and triggered the temporary evacuation of the properties most at risk of debris flows reaching residential structures.

A current study of the integrated landslide and flood risk for the Seton area is underway, and this section will be updated once that study is complete.

#### **Evacuation Protocol:**

Evacuate if directed by first responders (imminent threat, tactical evacuation), and/or if an evacuation order is issued by the SLRD due to conditions being assessed as dangerous enough to warrant an evacuation of identified properties. First responders and the SLRD will take a conservative approach in assessing flood risk evacuation trigger points, to ensure resident safety. Evacuation will apply to all identified properties at risk, which may result in a partial or full evacuation of the affected community. Evacuation route is preferably via Mission Mountain Road towards Lillooet but if the community is isolated by blocked /impassable roads, then evacuation within community to a Group Lodging and Reception Centre at the Sk'il Mountain School may be necessary.

Trigger points for evacuation are taken from the BC Forest Service Wet Weather Safety Guidelines (rainfall and snow melt), provincial experts and conditions at the time.

#### **EVACUATION ALERT TRIGGER POINTS**

- Rainfall event forecast of 25 – 45mm or more in less than 24 hours
- Rainfall event forecast of 25 – 45mm or more in less than 24 hours, plus snow melt calculations (see table #1 below)
- Cumulative rainfall of 40mm or more over >5 days, with additional continued rain forecast and/or snow melt calculations (see table #1 below).

#### **Snow Melt Soil Moisture Input**

Snow melt is an important factor in determining the total soil moisture input. The following tables provide guidance as to the amount of snow melt **that must be added** to the precipitation forecast or recorded in a rain gauge in applicable situations. Snow melt must be considered at or above the slope where the melt event is occurring.

**Table #1: 24 Hour Snowmelt additions during rain-on-snow events**

| Average | Open Area | Forested Area |
|---------|-----------|---------------|
|---------|-----------|---------------|

| temperatur<br>e | Wind* |          |       | Wind* |          |      |
|-----------------|-------|----------|-------|-------|----------|------|
|                 | Low   | Moderate | High  | Low   | Moderate | High |
| 0.5-2.0°C       | 3mm   | 10mm     | 25mm  | 1mm   | 5mm      | 11mm |
| 2.1 – 5.0°C     | 15mm  | 35mm     | 75mm  | 5mm   | 10mm     | 25mm |
| 5.1-10.0°C      | 25mm  | 70mm     | 120mm | 10mm  | 28mm     | 40mm |
| 10.1-15°C       | 35mm  | 95mm     | 160mm | 15mm  | 40mm     | 60mm |

**\*Low Wind** (<10 km/hr): Leaves and small twigs in constant motion speed; wind extends light flag

**Moderate Wind** (10-20km/hr, gusts >30km/hr): Small trees sway, maps/paper difficult to hold still.

**High Wind** (>20km/hr, gusts >40km/hr): Whole trees in motion, clouds moving rapidly, rain blowing sideways.

## TACTICAL EVACUATION TRIGGER POINTS

Heavy rainfall is occurring, and ANY of the following are observed:

- Sudden muddy water in creeks (especially in gullies)
- Sudden lack of flow in creeks during wet weather
- Cracks appearing in the soil
- Small (anything  $\geq 1m \times 1m$ ) sloughs of soil occurring
- Landslides occurring in the general area, or sounds of landslides occurring
- Blocked culverts
- Forecast rainfall is occurring, and stream full conditions are occurring or close to occurring.
- Thunderstorm or heavy rainfall event not forecast, generating torrential downpours and/or observed debris activity in the affected slide areas.
- Cumulative rainfall of 45mm over >5 days or more, with additional continued rain forecast, plus additional snow melt calculations from table #1 (above).

## Interface Fire

Seton is located in a located in a wildfire environment. Wildfires will happen – exclusion is not a choice. The variables in a wildfire scenario are:

- when the fire occurs, and
- where the fire occurs.

Wildfires in 2009 came close to the community and wildfire starts in the vicinity are not uncommon due to typically hot dry summers and the potential for isolated dry lightning events.

Potential ignition of an interface fire includes a lightning or human caused forest fire, a structural fire in the community that spreads to the wildland area, ignition relating to a train accident or sparking, and a vehicle collision related fire on Pemberton Portage Road that spreads.

The consequences of an Interface Fire event have the potential to be severe/catastrophic for the Seton community.

#### **Evacuation Protocol:**

At the **Evacuation Alert** stage:

- Residents with mobility or chronic health issues may choose to voluntarily evacuate to ensure their safety and continuity of care. If they choose to stay at this time, they should contact the SLRD Emergency Program staff to discuss their situation and/or make arrangements with a neighbor if they do not have a vehicle, and their primary healthcare provider if evacuation is medically complicated (e.g. dialysis, oxygen tanks).
- All other residents should make preparations to leave, ensuring that they have a plan for the safe evacuation of all people and pets, gather essential documents, medicines and necessities of food, clothing and other items.

At the **Evacuation Order or Tactical Evacuation** stage:

- At the direction of BC Wildfire Service, RCMP or other authorized first responders, residents will evacuate according to the evacuation route directions given.
- All residents must leave, ensuring that all people and pets in their household safely evacuate, and taking the previously gathered essential documents, medicines, necessities of food, clothing and other items. If these items have not been gathered in advance, there may be no time to take anything at the time of evacuation.
- Emergency Support Services (ESS) will be provided to those evacuated, including emergency accommodation if required.

#### **Severe Storm (All Seasons)**

The community may become temporarily isolated by a severe winter snow storm or summer storm with high winds that down trees, potentially knock out power lines nearby and trigger flash floods or slides. Winter heating is a concern, especially for vulnerable residents. Extended power outages presents health and safety risks including food spoilage, shortage and inability to store medications requiring refrigeration (e.g. insulin). Blocked roads compromise community access to emergency health services beyond the local ambulance service.

#### **EVACUATION PROTOCOL:**

Shelter in place until downed power lines are confirmed by BC Hydro as no longer hazardous. If emergency assistance is required, call 9-1-1 (if able). If a storm related evacuation is required, follow the instructions of first responders and official information from the SLRD. In the event of evacuation, Emergency Support Services (ESS) will be provided to full time residents who are evacuated, including emergency accommodation if required.

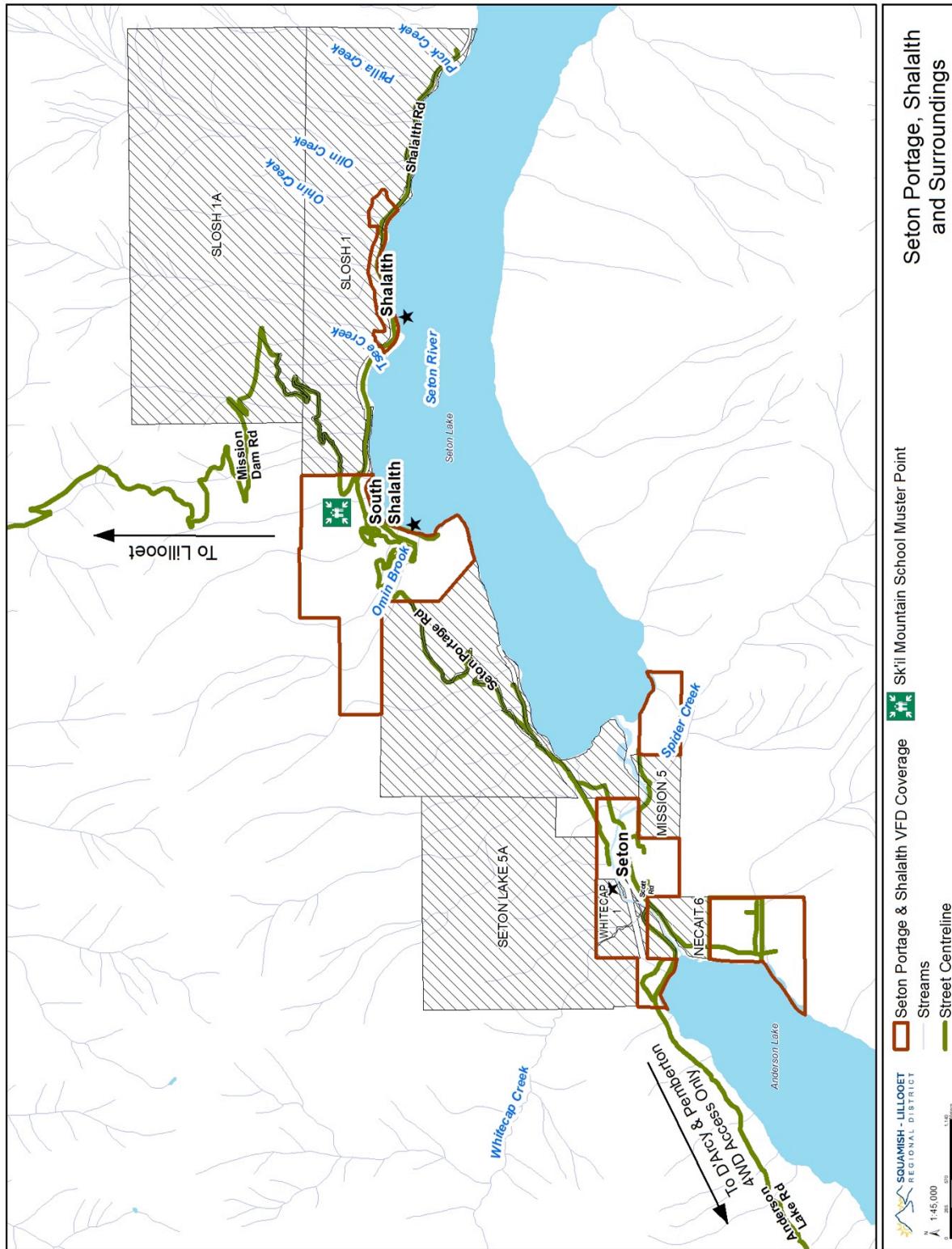
Residents who are vulnerable due to health conditions should discuss a plan in advance with their primary healthcare provider. This may include voluntary self-evacuation when a severe storm event is forecast, access to a back up power supply, and additional supplies of medication or an emergency prescription.

**SLRD ALERT.  
Be in the know, not in the dark.**

Free emergency notification service  
direct from the SLRD to you.  
Text, voice message and email options

**Sign up: <http://www.slrld.bc.ca/SLRDArt>**

## Community Map – Seton Portage VFD Fire Protection Area



## Community Action Plan

The SLRD will work with community representatives every three (3) years to review, assess and update the Community Action Plan.

### Historical Actions

- Seton has a group of trained first responders through the volunteer fire department
- Independent water and waste treatment system may be a protective element in the event of damaged infrastructure in neighbouring communities.
- The SLRD is working with Tsal'ahl on joint emergency preparedness and response to flood and debris flow threats.

### Current and Future Potential Actions by the Community

- Establish a **Neighbourhood Emergency Team (NET)** with members who have completed a criminal record check (free for volunteers and required in order to be placed in many volunteer roles during response). The SLRD can support the NET through training in basic emergency preparedness, evacuation notification, recovery considerations and other relevant topics that facilitate a two-way knowledge exchange of local government emergency processes and community capacity building. The SLRD can also connect communities to funding when it is available (e.g. FireSmart) and may sponsor a training session by an external provider for multiple communities if budget is available and there is sufficient demand. NET team members would be utilised in a disaster response as qualified volunteers under the direction of the relevant agency. The size of the NET, its organization and the level of training is at the discretion of the community and is independent of the SLRD.

NET team members may be progressively trained in:

- First Aid and simple triage
- Evacuation Processes
- Radio Communication
- Locating victims and resources
- BC Wildfire S-100 Basic Fire Suppression and Safety
- FireSmart community work days to remove woody debris and brush from near houses.
- Work with the SLRD to develop a basic Disaster Recovery Plan
- Fund a generator for emergency power at the Sk'il Mountain School
- Identify vulnerable residents and develop a plan with them for their continued safety in the event of a major emergency (EMBC resources available to assist planning)
- Identify and document skilled individuals in the community (e.g. doctors, nurses, electricians, engineers).

- Practice evacuation notification with the delivery of emergency preparedness public information resources to each house (these resources available through the SLRD)
- Campaign to get all residents signed up to the SLRD Alert emergency mass notification system for direct communication by email, text and landline from SLRD to residents and their nominated emergency contacts.
- Identify and purchase suitable satellite communication technology to ensure 9-1-1 and other emergency communication remains possible when other comms infrastructure is impacted.

## Looking for more information to make your community Disaster Resilient?

**SLRD** [www.slrdbc.ca/services/emergency-management](http://www.slrdbc.ca/services/emergency-management)

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

**ANIMALS** <http://www.cdart.org/beprepared.htm>

**COMMERCIAL LIVESTOCK** <https://www.slrdbc.ca/inside-slrdbc/reports/commercial-livestock-relocation-guide>

**FIRE SMART** [www.firesmartcanada.ca](http://www.firesmartcanada.ca)