

## Community Emergency Plan

# Fountain Valley



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## Table of Contents

Key definitions.....	3
Introduction .....	4
Community Overview.....	5
<b>Demographics</b> .....	5
<b>Land Use</b> .....	5
<b>Critical infrastructure</b> .....	5
<b>Response Capabilities</b> .....	5
Hazard, Risk and Evacuation .....	7
<b>Evacuation Routes</b> .....	7
<b>Debris Flow/Landslide</b> .....	9
<b>Interface Fire</b> .....	10
<b>Severe Storm (All Seasons)</b> .....	11
<b>Community Map – Fountain Valley</b> .....	13
Community Action Plan.....	14

## 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

## Fountain Valley 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

Fountain Valley is a rural community located on the east flank of Fountain Ridge, just east of Lillooet and immediately south of the Indian Reserve community of Fountain. There are many recreational dwellings and small ranches along the Fountain Valley Road, forming a small community of fulltime and seasonal residents in the valley, which is something of a rural 'suburb' of Lillooet.

Land movement hazards and events that isolate the community are most present in this area, along with considerable wildfire risk. Severe storms may directly impact the community or cut off access, isolating residents and seasonal visitors from emergency services

### Demographics

Mainly full time residents and farming property owners, some recreational property.

### Land Use

Single family homes, agriculture and recreational.

### Critical infrastructure

Drinking Water	Independent water supply per household from well, tank or stream filtration.
Sanitary/Waste Water Treatment	Septic tank or field.
Electrical Power Systems	BC Hydro supply available to some residences, some residences are off-grid
Gas Heating Systems	No
Communications	Landline, internet access. No cellphone reception.

### Response Capabilities

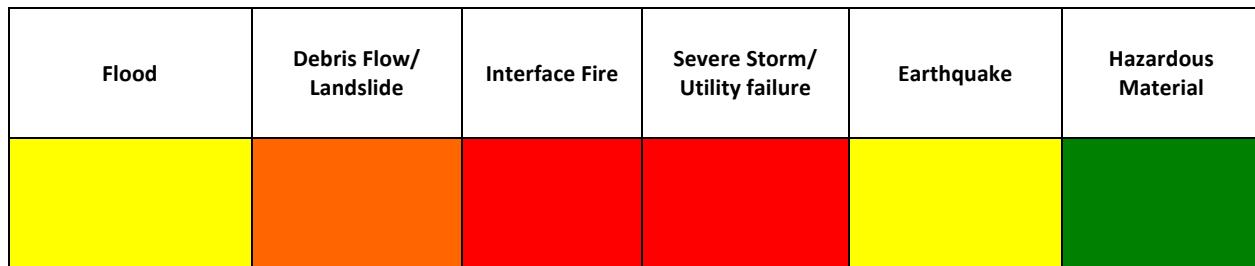
Structural fire	No structural fire protection
Wildland interface fire	Crews dispatched from Lillooet
Medical	Nearest BCAS base is Lillooet
Police	Nearest RCMP detachment in Lillooet

Evacuation	Opportunity for evacuation training from SLRD staff.
Communication	Landline and internet access available, subject to any infrastructure impacts. No cellphone service.

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# Hazard, Risk and Evacuation

## FOUNTAIN VALLEY HAZARD PROFILE



### 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 examines the high and moderate risk hazards.

## Evacuation Routes

Depending on the type, location and severity of the threat, evacuation from the Fountain Valley would ideally be along the Fountain Valley Road and Highway 99 towards Lillooet at the direction of first responders. An alternative, but longer route is Fountain Valley Road and Highway 12 in the direction of Lytton. The recommended evacuation route will also be printed on the official evacuation notice delivered by first responders and/or published on the SLRD website. No other obvious vehicular alternatives.

## Community Muster Point:

Evacuation towards Lillooet Muster point [TBC by community]

Evacuation towards Lytton Muster point: south end of Fountain Lake [exact location TBC by community]

The Muster Point will be used if evacuation by bus or RCMP escort due to road conditions, or to receive additional information or supplies (e.g. bottled water) before evacuating.

## 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.

## Debris Flow/Landslide

Landslides include a range of downhill earth movements, including slope failure, rock falls and debris flows. Landslides can be extremely destructive and are caused by a number of pre-existing and contributing factors that cause the slope to fail, including heavy rainfall or rapid snowmelt, erosion, poor construction practices, freezing and thawing, earthquakes and volcanic eruptions.

Concave slopes like gullies and ravines are particularly susceptible to debris flows because they tend to concentrate surface water runoff and accumulate surface water and loose soil. Debris flows can be initiated due to both natural factors and man-made intervention.

With the changing climate the Fountain Valley landslide risk may also be changing. Notably, the Fountain Slide is a nearby short section of Highway 99 where land movement has repeatedly closed or restricted access to and from Lillooet, affecting access to goods and services for the Fountain Valley residents, including emergency first responder access from Lillooet. Work is currently ongoing to improve the safety of the Fountain Slide area.

### **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 debris flow 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.

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 temperature	Open Area			Forested Area		
	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

The Fountain Valley community is located in a wildfire environment, surrounded by forested and semi-forested areas. Historically, a number of spot fires have occurred in the area and wildfires of note have occurred in the vicinity, including fires in 2009 that threatened the community. Regular fuel treatment work has been done in this area to manage the wildland

interface fire risk. Wildfires will happen – exclusion is not a choice. The variables in a wildfire scenario are:

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

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 from a vehicle collision related fire that spreads.

The consequences of an Interface Fire event have the potential to be severe/catastrophic for the Fountain Valley community and there has been ongoing work to

## **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 and potentially knock out power lines nearby. Extended power outages presents health and safety risks including food spoilage, shortage and inability

to store medications requiring refrigeration (e.g. insulin). Downed landlines would leave the areas of the community without 9-1-1 service. Blocked access along the Yalakom or Bridge River Roads compromises community access to emergency health services.

**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 those 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.

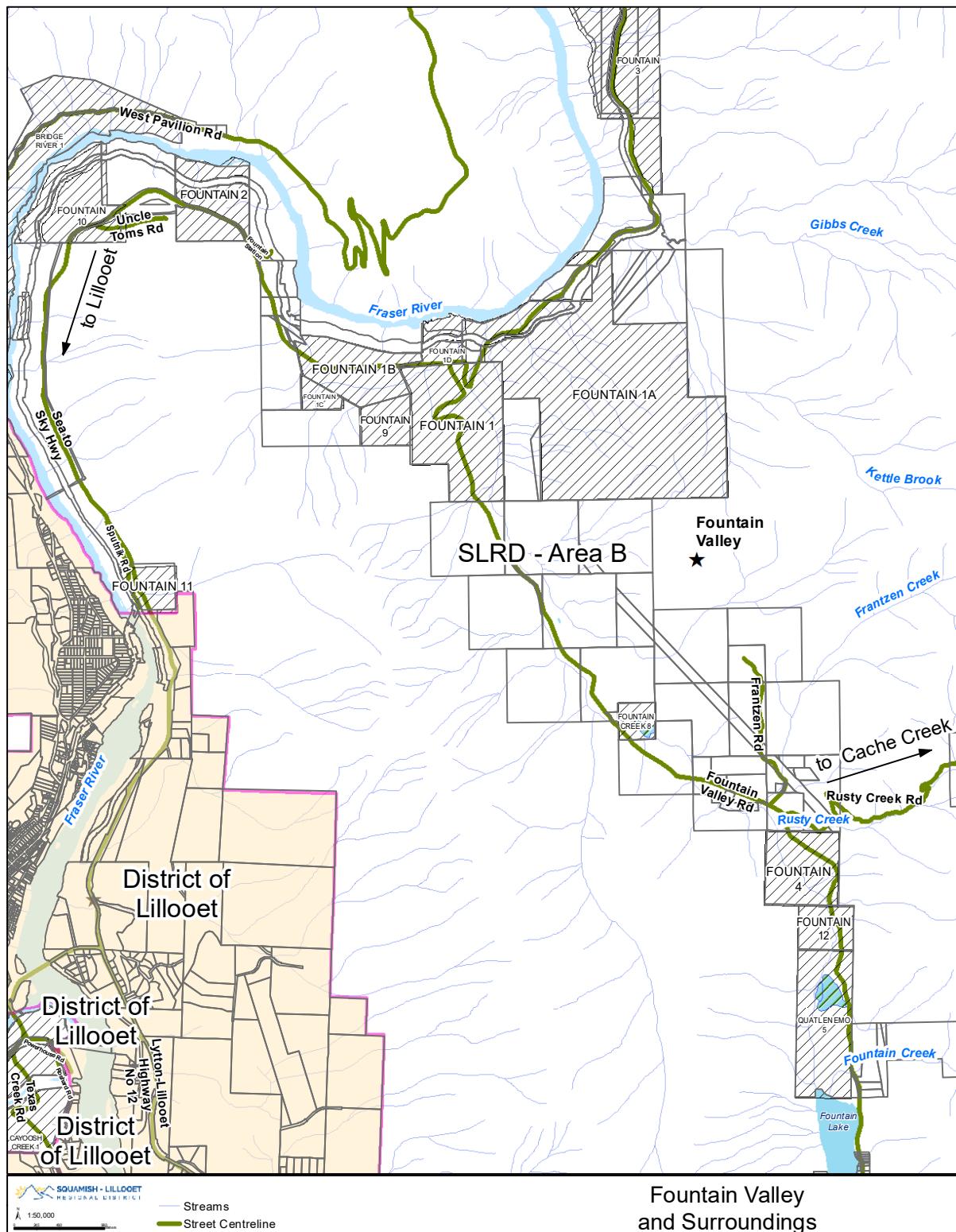
**SLRD ALERT.**

**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.slrdbc.ca/SLRDArt>**

## Community Map – Fountain Valley



## 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

- Independent water and waste treatment system may be a protective element in the event of damaged infrastructure in neighbouring communities.
- Other actions TBC by community

### 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
- Work to achieve official FireSmart Community status
- Work with the SLRD to develop a basic Disaster Recovery Plan
- 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.

## **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.cgart.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)

