

Community Emergency Plan

WedgeWoods



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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

WedgeWoods

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

Located 1.2 kilometres from the north boundary of the Resort Municipality of Whistler, WedgeWoods is a master planned property development encompassing 600 acres, 350 acres of which are protected wilderness. It is a four-phase development of large residential lots situated in a forested area alongside Highway 99. Currently a very small population of ~6 full time residents, with some seasonal residents and around 30 lots slated for development in 2018-19.

The community is most obviously exposed to interface fire risk due to the surrounding forest, and the proximity of a main highway increases the potential for a hazardous material incident or an interface fire starting from a vehicle accident. Severe storms may result in extended utility outages.

Demographics

Mainly full time residents.

Land Use

Single family homes with some common areas.

Critical infrastructure

Drinking Water	Independent water treatment facility
Sanitary/Waste Water Treatment	Independent WWT facility.
Electrical Power Systems	BC Hydro supply available to all residences
Gas Heating Systems	Individual propane tanks on each lot
Communications	Landline, internet access. Unreliable and patchy cellphone reception

Response Capabilities

Structural fire	No structural fire protection service. Whistler Fire Service may respond at its discretion.
Wildland interface fire	Crews dispatched from Pemberton.

	Opportunity for local training in basic fire suppression methods
Medical	Nearest BCAS base is in Whistler.
Police	Nearest RCMP detachment in Whistler
Evacuation	Opportunity for SLRD to conduct evacuation notification training with community.
Communication	Landline, internet access available, subject to any infrastructure impacts. Unreliable cellphone service.

draft

Hazard, Risk and Evacuation

WEDGEWOODS HAZARD PROFILE

Flood	Debris Flow/ Landslide	Interface Fire	Severe Storm/ Utility failure	Earthquake	Hazardous Material
LOW RISK	MODERATE RISK	MODERATE RISK	MODERATE RISK	LOW RISK	MODERATE RISK

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

Evacuation route will be north or south along Highway 99 at the direction of first responders, and the recommended evacuation route will also be printed on the official evacuation notice delivered by first responders and/or published on the SLRD website.

Community Muster Point: Multiple muster points may be required due to the nature of the development and connecting roads and bridges vulnerable to disaster impacts. The Wedgewoods Strata Council will discuss with the SLRD Emergency Program to determine the most appropriate locations. 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.

Interface Fire

WedgeWoods is 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.

Spot fires have occurred in the vicinity of the community and during the summer of 2015, the Elaho Fire extended over 12,000 hectares and burned for almost two months before being assessed as 100% contained.

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 and a vehicle collision related fire on highway 99 that spreads.

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

Hazardous Materials

WedgeWoods is located alongside the Sea-to-Sky Corridor (Highway 99) where a variety of hazardous materials are transported by road, and fuel spills are also possible from this source, with the consequential risk of fire.

Depending on the substance released and its location, sheltering in place may be the only viable option.

The consequences of a Hazardous Materials spill are likely to be highly variable, depending on the substance, proximity, volume, time of day and speed of notification to residents.

EVACUATION PROTOCOL:

At the direction of Vancouver Coastal Health, Ministry of Environment officials or first responders, residents will Shelter in Place or Evacuate depending on the hazardous substance involved. In the event of evacuation, Emergency Support Services (ESS) will be provided to those evacuated, including emergency accommodation if required.

Severe Storm (All Seasons)

Although close to Whistler, this 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. 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, including highway access, 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 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.

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.

The forested slopes of Garibaldi Provincial Park rise up behind the WedgeWoods community and present a potential source of land movement hazard.

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:

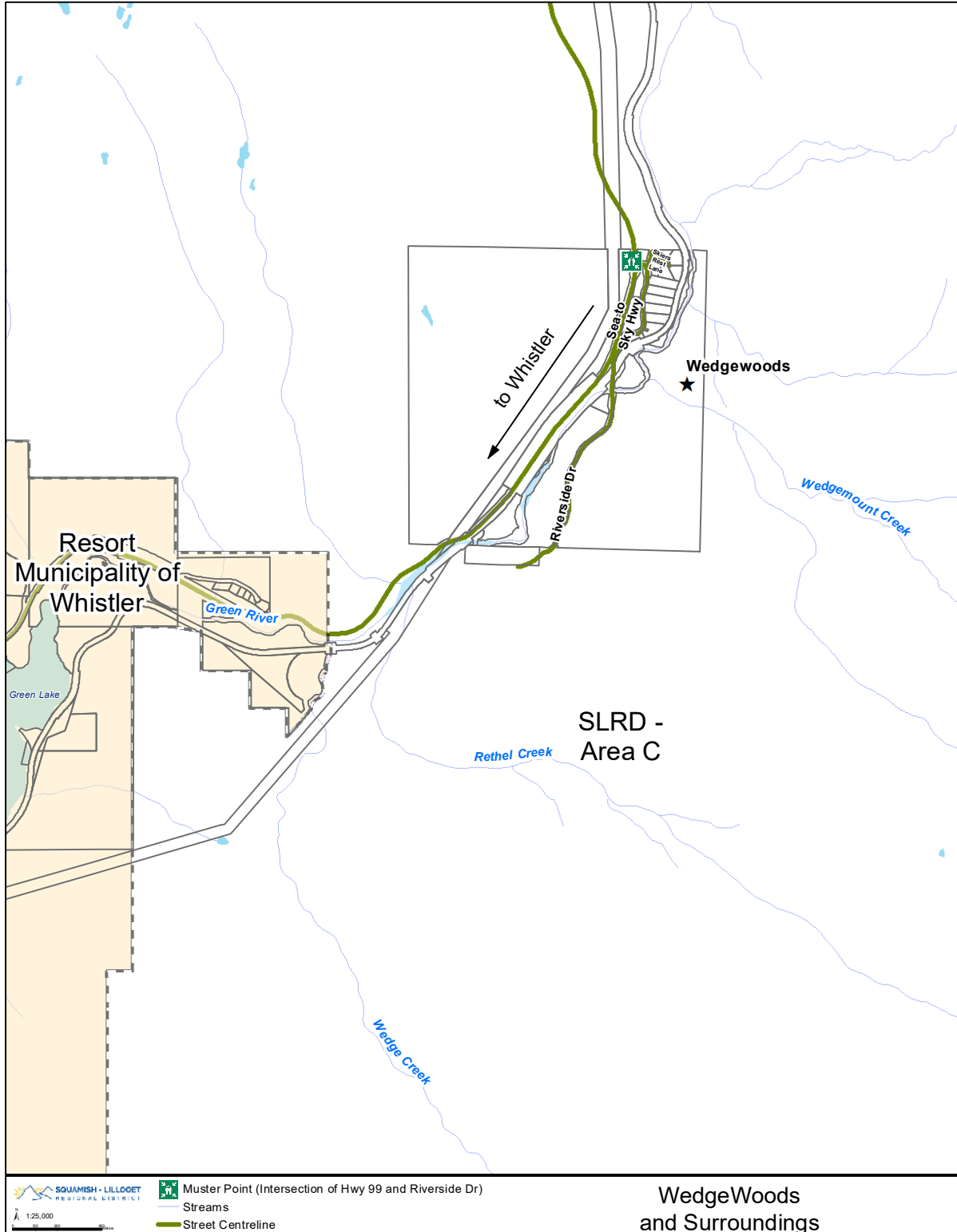
- Sudden muddy water in creeks (especially in gullies)
- Sudden lack of flow in creeks during wet weather
- Cracks appearing in the soil
- Small (anything $\geq 1\text{m} \times 1\text{m}$) sloughs of soil occurring
- Landslides occurring in the general area, or sounds of landslides occurring
- Blocked 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).

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.slrd.bc.ca/SLRDAlert>

Community Map – WedgeWoods



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

- The SLRD is currently in discussion with the Resort Municipality of Whistler to establish contract structural fire protection for the WedgeWoods community.
- One strata council member is a trained Local FireSmart Representative.
- Independent water and waste treatment system may be a protective element in the event of damaged infrastructure in neighbouring communities.

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.
- Wedgewoods Strata Council to invite the SLRD Emergency Program staff to discuss muster point locations and emergency preparedness as the community population grows.

Looking for more information to make your community Disaster Resilient?

SLRD	www.slrd.bc.ca/services/emergency-management
GENERAL	http://www2.gov.bc.ca/gov/content/safety/emergency-preparedness-response-recovery
ANIMALS	http://www.cdart.org/beprepared.htm
FIRE SMART	www.firesmartcanada.ca