



SQUAMISH - LILLOOET
REGIONAL DISTRICT



Emergency Program

2016 ANNUAL REPORT



Pemberton Flood 2016. Photo courtesy of Sylvie Allen

Executive Summary

The past twelve months have represented another active year for the SLRD emergency program. The regional district encompasses a particularly beautiful and hazardous environment with communities spread over a considerable geographic distance, many with limited road access and telecommunications infrastructure, adding to the challenge of emergency planning and response.

SLRD's emergency operations centre was activated three times this year for various hazard impacts in the regional district, with flooding and land movement primary causes for emergency response. The risk potential from changing hazards has also been a focus this year, with volcanic activity recorded on Mt Meagher, significant movement at the 10 Mile Slide north of Lillooet, and increased rock fall observed from Mt Currie. As such, the emergency program continues to promote the SLRD Alert emergency notification system and encourage all residents to sign up to receive emergency alerts and information in their area.

The regulatory environment in which the emergency program operates continues to change and develop. An amended Special Events Bylaw has been drafted to reinforce aspects relating to public safety for large gatherings. Events such as the Pemberton Valley Music Festival continue to grow as people are drawn to the outstanding natural landscape, and promoting public safety through appropriate planning and process is part of the emergency program. The SLRD also provided feedback and input, with other local authorities, to proposed amendments to the BC Emergency Program Act, which is the umbrella legislation for how emergency programs in the province operate.

A review of how fire services are delivered was conducted with community input, and the results of this review are now being consolidated with a view to updating the Fire Protection Services Regulation Bylaw in 2017. Wildland interface fire risk has continued to be topical for residents. The emergency program has been promoting the Canadian FireSmart initiative where communities can receive FireSmart recognition through undertaking activities that reduce the risk of interface fire.

In June, the SLRD added a permanent part time Emergency Management Analyst to the Emergency Program. This role focuses on policy and planning, particularly direct planning with communities to develop tailored emergency plans for use in the community, by the community.

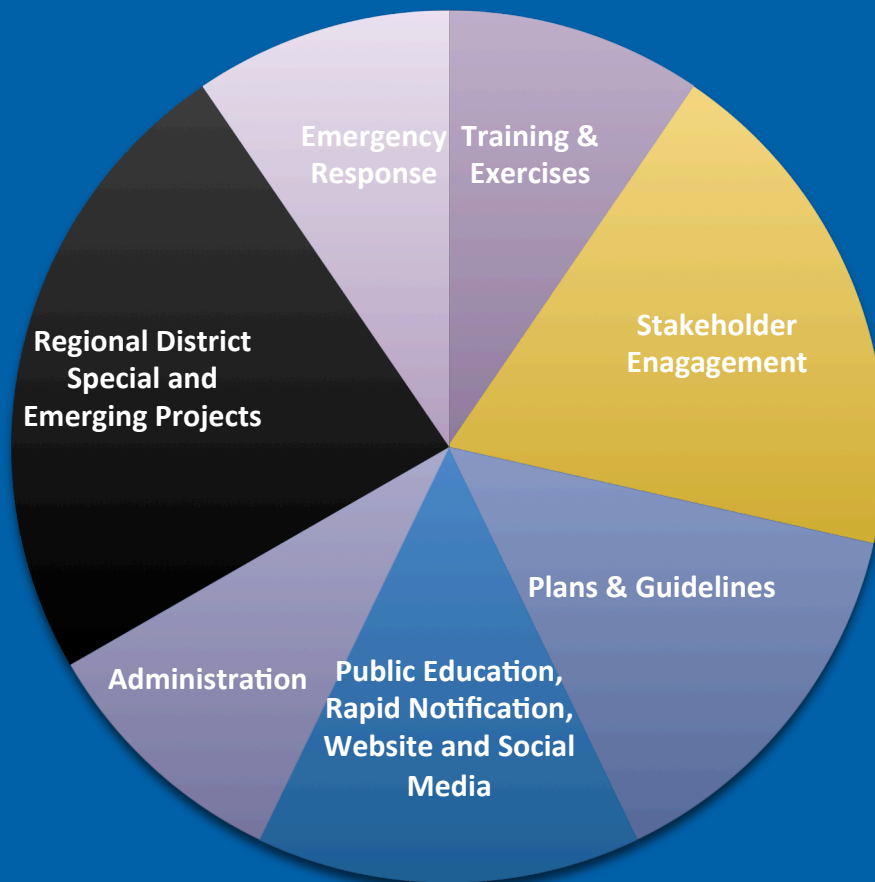
Evacuation was a planning focus in 2016. As part of a 10-member BC local authority working group, the SLRD emergency program provided leadership and input to the development of shared processes, messaging and resource development for a shared approach to evacuation and the safe return of residents to their homes.

Looking ahead to 2017, the SLRD emergency program will continue to focus on improving disaster preparedness, response and recovery, explore options for mitigation, and also work directly with community groups on resident-led emergency response processes and disaster resilience.

2016 Emergency Program: in brief

- Activated the SLRD Emergency Operations Centre three times in 2016, for flooding and debris flow events in the Seton Portage, Pemberton Meadows and Upper Squamish Valley areas.
- Severe weather warnings and high stream flow advisories were issued 14 times in 2016, weather events that affected residents and travellers throughout the SLRD.
- The SLRD Emergency Program, along with other responders, received a Premier's Award for work on the September 2015 Pemberton (Birken) mudslide event.
- Developed a Livestock Emergency Relocation Guide for commercial livestock owners.
- Partnered with the District of Squamish and Squamish Nation in a full-scale evacuation exercise in Squamish to test multi-agency response coordination.
- As Fire Services Coordinator, the Emergency Program supported and provided input to the operations of the five SLRD volunteer fire services in Britannia Beach, Garibaldi, Bralorne, Birken, Gun Lake and Seton Portage.
- Successfully applied for provincial funding to initiate a detailed study and risk analysis of the Mt Currie rockfall hazard, due for completion late 2017.
- Prepared detailed joint submission with the District of Squamish and Resort Municipality of Whistler on proposed changes to the BC Emergency Program Act.
- Prepared a detailed flood Risk Assessment in support of the Pemberton Valley Diking District submission to the National Disaster Mitigation Fund for updated flood plain modelling to inform future land use planning and risk management.
- SLRD Alert system used regularly to reach specific communities affected by natural hazard effects, road closures and utility system outages.
- Conducted Forest Fire Management (FFM) activities including updated Community Wildfire Protection Plans for Areas B, C, and D. Completed a 12.4 ha operational fuel treatment at Gun Lake. Next year, the Emergency Program will be offering the opportunity for Electoral Area Directors to set aside select funds for development of operational prescriptions in Areas C and D, and a CWPP update in Area A. Area B will continue with the development of prescriptions using funds set aside by the Area Director for that purpose.
- Facilitated special event permitting to promote public safety and emergency preparedness, including the Pemberton Valley Music Festival and Tough Mudder sporting event.

Areas of Focus in 2016



2016 FINANCIAL SUMMARY (PROVISIONAL)

EMERGENCY PROGRAM BUDGET	114,084
GRANTS (UBCM FireSmart Initiative)	10,000
RESPONSE/RECOVERY COSTS (recovered from EMBC)	39,000

Strategic objectives & achievements

STRATEGIC OBJECTIVE	WHAT WE SET OUT TO ACHIEVE	WHAT WE ACHIEVED
Ensure statutory compliance under the Emergency Program Act (2005) and all other applicable legislation	Maintain statutory compliance and advocate for change where applicable.	<p>Participated in the local authority submission process with EMBC regarding a substantial proposed review of the Emergency Program Act. Made a detailed joint submission in conjunction with the DOS and RMOW.</p> <p>Initiated a review of the SLRD Emergency Plan, to be progressed in 2017.</p> <p>Produced an Elected Officials Emergency Response Guide (currently under review) as a quick reference to processes, roles and responsibilities during a major emergency or disaster.</p>
Disaster risk reduction for the 31 communities of the SLRD through increased knowledge and community engagement.	Partner with targeted communities to reduce their interface and structural fire risk through the Fire Smart initiative.	<p>All communities offered the opportunity to apply for funding to cover FireSmart initiatives.</p> <p>Emergency planning engagement with McGillivray Falls community and wildfire hazard mitigation planning with Upper Squamish Valley community.</p> <p>Conducted Forest Fire Management (FFM) activities including updated Community Wildfire Protection Plans for Areas B, C, and D. Completed a 12.4 ha operational fuel treatment at Gun Lake (Area A).</p> <p>Next year, the Emergency Program will be offering the opportunity for Electoral Area Directors to set aside select funds for development of operational prescriptions in Areas C and D, and a CWPP update in Area A. Area B will continue with the development of prescriptions using funds set aside by the Area Director for that purpose.</p>
Increase Community-based response capacity through community empowerment and relationship building.	Increased knowledge of the hazards, risks and vulnerabilities of each community to enable better risk reduction planning, and development of community specific operational emergency management plans	<p>Ongoing campaign to continually increase subscriptions to the SLRD Alert emergency mass notification system.</p> <p>Initiated community risk assessment and emergency planning process with four communities,</p> <p>Wrote and facilitated a functional emergency exercise with Xaxli'p First Nation.</p>

Strategic objectives & achievements

STRATEGIC OBJECTIVE	WHAT WE SET OUT TO ACHIEVE	WHAT WE ACHIEVED
Support economic resilience of communities	Support business and organizational stakeholders by assisting with emergency management planning advice in terms of public/private interface of response roles and responsibilities	<p>Compiled risk Assessment for the Pemberton Valley Diking District (PVDD) application to the National Disaster Mitigation Fund for updated flood plain mapping to inform future land development planning. Application has now moved forward for Federal consideration.</p> <p>Member of the Roads Stakeholder group, which meets twice yearly to address any events that have the potential to impact, or have impacted, public safety and transport access.</p> <p>Provided emergency response planning support to the Britannia Beach Mine Museum.</p>
	Produce and distribute a Livestock Emergency Relocation Guide for rural communities to support the safe movement and timely transport of livestock.	Produced the Livestock Emergency Relocation Guide, to be made available in hardcopy and downloadable from the SLRD website.
	Manage the permitting of Special Events in the SLRD to promote economic development alongside public safety for residents and visitors.	Coordinated the regulatory compliance of special major events with impacts in SLRD areas, including the Pemberton Valley Music Festival (~180,000 attendees over four days) and Tough Mudder, Whistler (~25,000 attendees).
Promote SLRD organizational readiness and business continuity	Provide opportunities for staff members to enhance their emergency management skillset	Although no formal training was conducted this year, the three emergency response activations provided the opportunity for staff to gain real time learning and practice of roles in the Emergency Operations Centre (EOC)
Build coordinated emergency response capacity in the Sea to Sky Corridor	Support and enhance coordinated process and planning with Corridor Local Authorities included North Shore Emergency Management (Tri-Cities), District of Squamish, Village of Pemberton, Resort Municipality of Whistler, and First Nations.	Member of Evacuation planning working group of 10 BC Local Authority Emergency Managers which has produced consistent messaging, mapping and response protocols and processes, including plain language public information materials. This means increased public safety through greater efficiency when communicating between local authorities, between responding agencies and out to the media and public.

Strategic objectives & achievements

STRATEGIC OBJECTIVE	WHAT WE SET OUT TO ACHIEVE	WHAT WE ACHIEVED
Build coordinated emergency response capacity in the Sea to Sky Corridor	Support and enhance coordinated process and planning with Corridor Local Authorities included North Shore Emergency Management (Tri-Cities), District of Squamish, Village of Pemberton, Resort Municipality of Whistler, and First Nations.	<p>Provided funding support for the operations of the Village of Pemberton Emergency Support Services (ESS) volunteer team.</p> <p>Participated in the twice-yearly EMBC Seasonal Readiness Workshops in the SouthWest and Central BC Regions.</p> <p>Supported the North Shore full-scale evacuation exercise through participation and collecting metrics for the development of a software based evacuation tool for first responders.</p> <p>Member of the Sea-to-Sky Emergency Program Coordinator's working group, which meets quarterly with the purpose of improving jurisdictional interoperability for emergency response.</p> <p>Proactively communicated with other jurisdictions during emergency response to enhance emergency coordination and effective use of resources.</p> <p>Provided funding support for the operations of the District of Squamish Emergency Support Services (ESS) volunteer team</p> <p>Provided funding and regulatory support to the five SLRD Volunteer Fire Services to foster structural and interface fire preparedness and response.</p>

SLRD emergency response summary

The Emergency Operations Centre or EOC is the physical location where an organization comes together during a disaster response. It functions as a “mission control” where coordination and management decisions are facilitated.

EOC activities can include:

- Coordinating & prioritizing resource requests from the site(s)
- Resolving conflicting demands for support and resources
- Coordinating and liaising with federal, provincial and other local governments and other agencies involved in the response
- Preparing media releases and scheduling press conferences
- Preparing and disseminating information to inform and alert the public and staff
- Establishing a public call centre to provide accurate information to impacted residents
- Analyzing and evaluating data and maintaining maps, display boards and other data
- Planning for the continuance of local government

In 2016, the SLRD EOC was activated three times:

Response Event: Seton Portage/Anderson Lake Freshet (April 2016)

Unseasonably high temperatures from 18 -22 April 2016 initiated early freshet melt in the drainages feeding Anderson Lake. Anderson Lake was unusually high throughout the winter of 2015/16 due to the impacts of a September 2015 debris flow on the Seton River.

Key actions: removal of several large boulders from the mouth of the Seton River at Seton Portage to improve water flow from Anderson Lake, monitor water levels and coordinate the provision of sandbags to properties in Seton Portage at risk of flooding during this time.

Response Event: Seton Portage Thunderstorm and Debris Flow (July 2016)

On the evening of 30 July 2016, a severe and localized thunderstorm accompanied by intense rainfall triggered debris flows from Spyder and Bear Creek drainages in Seton Portage.

Key actions: The Seton Valley Fire Department tactically evacuated several residents from the most severely impacted area against threat of further debris flows, and the Tsal'alh First Nation evacuated a home and an apartment complex. Emergency Support Services (ESS) provided services to five affected residents.



An ongoing issue: September 2015 debris flow also caused flooding.
Image courtesy of Chromer Fishing/Lillooet News

The debris flow was monitored by a MFLNRO hydrologist until it was assessed that the immediate threat to the community had passed. The severe thunderstorm also initiated 3-5 wildfire starts along the Highline Road, which were extinguished by the Pemberton Fire Zone. Moving forward from this event, the SLRD will be coordinating with local and provincial stakeholders to address the increased frequency of these events in terms of further hazard and risk assessment, and mitigation options.

Response summary continued...

Response Event: Fall Flooding (November 2016)

Heavy rains and unseasonably warm weather across the Sea-to-Sky area on 8, 9 November 2016 resulted in flood impacts for SLRD Electoral Areas B, C and D. Flooding was compounded by snow melt inputs into both the Squamish and Lillooet watersheds. Some residences were isolated by road washouts others were evacuated due to rising floodwaters, logjams threatened two bridges and washouts on Upper



Image courtesy of CTV news

Squamish Valley Road and Pemberton Meadows Road impacted traffic flows into and out of these areas. Seton Portage/Tsal'alh experienced several landslides, isolating the community from the south and triggering the tactical evacuation of two homes.

Key Actions: Notify and update affected residents through the SLRD Alert rapid notification system, through media and website updates. Coordinate operational response, acquire resources and monitor all affected areas in conjunction with Emergency Management BC and all operational response partners including neighbouring jurisdictions, provincial ministry representatives, and the Canadian Red Cross.

Response Event: Fountain Slide (September 2016)

Highway 99 was closed at the Ten Mile (Fountain) Slide, about 15 km north of Lillooet, on Xaxli'p reserve lands, after concerns were raised about sudden slumping on the road. The road re-opened on October 5 to single-lane, alternating traffic.

Although the SLRD EOC was not activated for this response, the emergency program was actively involved as a key stakeholder in terms of the communities affected by the closing of this key access road.

In December 2016, the Ministry of Transport and Infrastructure announced \$60 million for work to stabilize the ten-mile slide with some 400 soil anchors above the highway and a shear-resistant wall below the highway.





Increase your disaster resilience:

- **SIGN UP** for SLRD Alert at slrd.bc.ca
- **STOCK UP** your emergency kits for home and to go
- have an emergency **PLAN** for people and pets
- **CONNECT** with your neighbours.

