

Operational Evacuation Route Plan

SilverStar



Spring 2022



REGIONAL
DISTRICT
NORTH
OKANAGAN

SUMMARY SHEET

Plan Ref.	[Insert reference #]
Purpose	Operational Evacuation Guide
Partners	EOC vetted staff and other, partner organizations as appropriate.
Date Plan comes into force:	[Insert date of adoption]
Date of Plan Review:	
Plan Owner:	Regional District of North Okanagan (RDNO)
Plan drawn up on behalf of:	RDNO – Silver Star
Plan drawn up by:	Sundog Solutions 297 Windsor Ave. Penticton, BC www.sundogsolutions.ca
Location of Plan in Force	RDNO Emergency Operations Centre: 9848 Aberdeen Road, Coldstream, BC V1B 2K9

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Foreword

This plan sets out the arrangements made by the Regional District of North Okanagan (RDNO) to ensure an informed and coordinated evacuation to an emergency event at or near Silver Star Mountain, which will protect life as the priority.

The purpose of the document is to enhance and provide guidance to the coordination of an evacuation response. It is designed to be used by the RDNO in conjunction with existing emergency plans, the Regional Evacuation Framework, area response maps and general emergency response procedures for the RDNO.

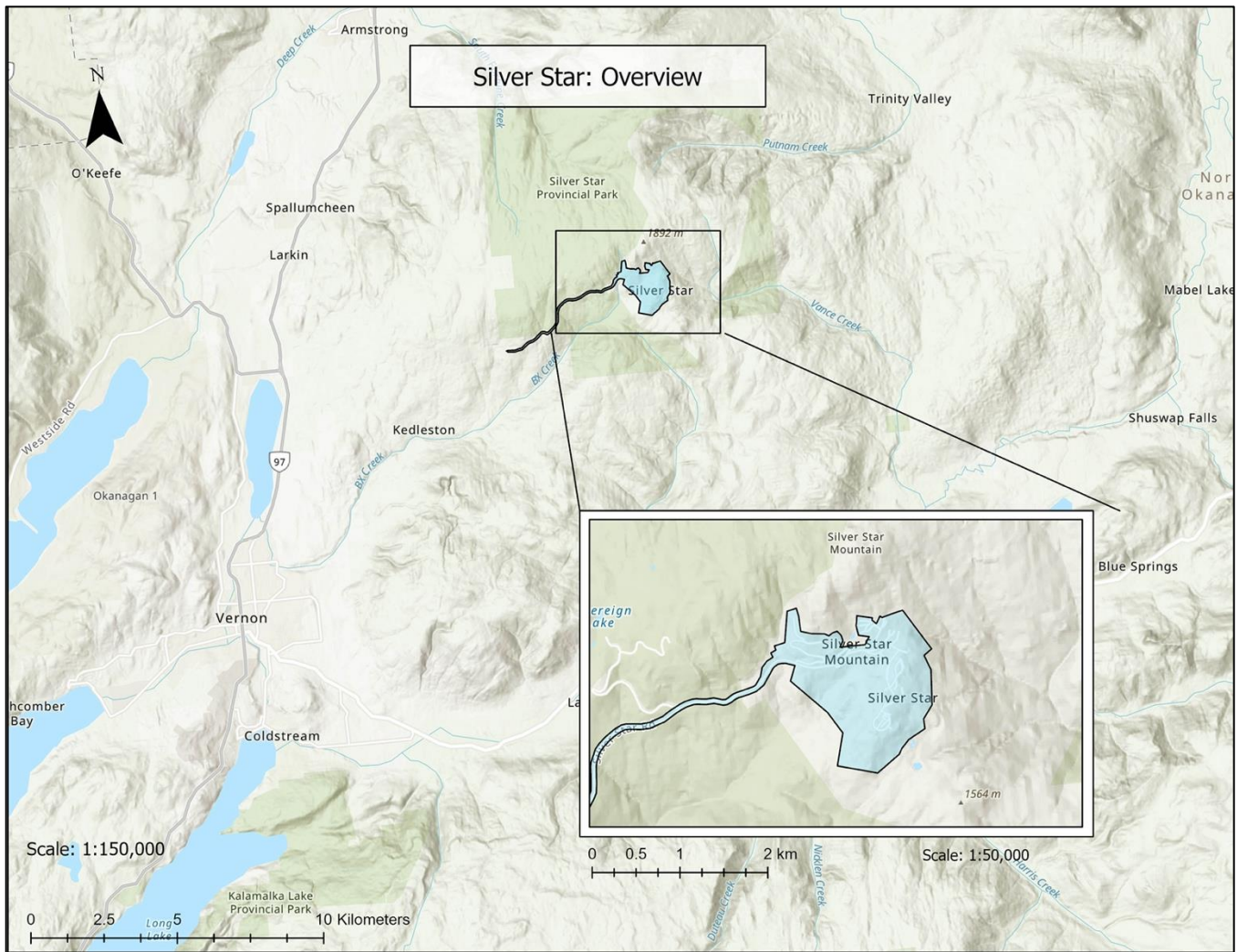
The Operational Guide is a controlled PROTECTED document and is CONFIDENTIAL. The contents should not be altered except when an update is issued via the designated Emergency Program Coordinator. The plan also holds personal telephone numbers for various organizations and stakeholders. This information must not be made available to anyone other than vetted EOC staff involved with managing an incident.

EOC staff will need to use their professional judgement and will require a level of competence to undertake the key incident management roles.

This guide does not replace the need for staff training and shall not operate as a stand-alone plan for evacuations within the RDNO but shall be read in conjunction with the existing emergency response plans and procedures that guide the activation an Emergency Operations Centre (EOC) and supporting roles.

1 Silver Star Summary

Silver Star BC is a resort community located 22 kilometers northeast of Vernon, in Electoral Area 'C' of the Regional District of North Okanagan. Silver Star is situated on the edge of the Okanagan Highlands typified by rolling summits. The elevation at the top of Silver Star Mountain is 1890 metres above sea level. The base Village is situated at 1600 metres asl. The area lies within the 'Interior Douglas Fir' and the 'Sub-alpine Engleman Spruce and Douglas Fir' Biogeoclimatic Zones. Skiing and other winter activities are the major focus of the community with special summer entertainment programs and summer recreation sports completing the year round resort calendar.



Key Population considerations:

Zone	Population (Average/ Estimate)	Total Dwellings/ Occupied Year round	Clearance Time	Contingency Time (minutes)	Total
ZONE 1 – Silver Star NW	760	189	90min	120	3hr 30min
ZONE 2 – Silver Star Village	504	126	65min	120	3hr 5min
ZONE 3 – Silver Star SE	856	213	110min	120	3hr 45min
TOTALS	2,250	600	4hr 30min	120	6hr 30min

SITUATION ASSESSMENT: Evacuation Alert

- Trigger Point for Evacuation Alert determined by EOC Director
- “Critical Stakeholder Notification” contacts (below) to be advised of Alert when declared
- Place individual calls – request their email for conference call / webinar invites
- Establish Conference Call / Webinar schedule
- Messaging for residents at Alert Stage:
- Be prepared to leave immediately if given an Order
- Residents encouraged to pre-plan where to re-locate if given an Order
- Under an Evacuation Alert, livestock owners need to be notified that they should be addressing their livestock issue and not waiting for an Evacuation Order.
- If you want to relocate trailers – relocate during evacuation alert do not wait until order.
- Park Vehicles to allow easy evacuation.
- Upon an Order, only single vehicles will be permitted on the evacuation route, not trailered boats and RVs etc.
- Reference Evacuate Alert template.

SITUATION ASSESSMENT: Evacuation Order

- Need for evacuation determined by Incident Commander / EOC Director
- Declaration State of Local Emergency prepared / formalized for the affected Electoral Area or Municipality
- Evacuation Order prepared / formalized
- Board Chair advised, approves formal Orders and Declarations
- **“Critical Stakeholder Notification” contacts to be advised of Order when declared**
- Reception Centre location(s) need to be identified by the EOC and communicated to Incident Command
- **EOC plans to use Zone Maps to produce map of Order and Address List and provide to Site Operations** (coordinate with appropriate stakeholders)
- Reception Centre / Group Lodging locations listed below

2 Evacuation Planning

Evacuation Trigger Points for interface wildfire can be determined by reviewing the hazard data available for Silver Star, its proximity to structures and the fuel to map a 2km and 5 km buffer around structures. It will be important to consider the implications to Silver Star Road and depending on where the wildfire originated, a larger buffer may be needed to maintain egress. Shelter-in-place or egress via an FSR are potential options but will take additional time to initiate.

2.1 Evacuation Timeline

Activities	Event Start	Minutes						Hours			
	0	10	30	60	90	120	2	4	6		
Assessment and decision		→									
Authority and paperwork			←→								
Engage EOC resources			←→								
Mobilize site personnel					←→						
Public notification and media					←→						
Physical Evacuation							←→				
Contingency Time				←→							
Key Activities							Physical Evacuation Starts		Zone clearance Time		

2.2 Zone Evacuation Decision Times

Decision Time	Time (Minutes)			Activity
	Silver Star Village	Silver Star Rd. North	Silver Star Rd. South	
Risk level identification and assessment	10	10	10	Sequential
Contact personnel and fill EOC positions	30	30	30	Sequential
Paperwork for drafting Alert/Order/SOLE	30-60	30-60	30-60	Simultaneous
GIS information for maps and civic addresses	60-90	60-90	60-90	Simultaneous
Mobilize personnel emergency Services	30	30	30	Simultaneous
Mobilize personnel Search and Rescue	90 to 120 (on site)	90 to 120 (on site)	90 to 120 (on site)	Simultaneous
Notification:	30-60	30-60	30-60	Sequential
Digital and non-digital social media, info releases	30 to 45	30 to 45	30 to 45	Simultaneous
Physical evacuation	T + 90mins (average time one way) T + 30mins (average time two way)	T + 65mins (average time one way) T + 40mins (average time two way)	T + 1 hr 43mins (average time one way) T + 1hrs 5mins (average time two way)	Sequential
120 minutes contingency	T + 120	T + 120	T + 120	Sequential

2.3 Population Information

Categories	
Overall* (year-round residential)	336
Youth (0-19)	15
Adults (20-64)	75
Seniors (65-84)	15
Elderly (85+)	5
Total private dwellings	518
Dwellings occupied by usual residents	156
Seasonal (Summer)	
Seasonal residents	600 (residents and staff)
Daily visitors	400-600 (weekdays) 800-1200 (weekends)
Seasonal (Winter)	
Seasonal residents	1,500 (residents and staff)
Daily visitors	1200 (weekdays) 6500 (weekends/peak)

*The most recent census data for Silver Star is from 2021 and evaluates residential dwellings only. According to the RDNO, including seasonal staff, the regular daily numbers during the summer are approximately 600.

2.4 Worst Case Scenario Evacuation (April to November)

Number of Evacuees	Population category/requirements	Additional Considerations
2,250	Permanent residents, tourists and seasonal residents	This number is variable but accounts for the maximum number of people that may be in the area at any one time
100	Carless population	Due to the geography, landscape and rural nature of the area we have assumed less than 5% would be without a car. Time of day may increase this by an additional 5%
200	Require lodging	Not able to stay with friends and families in nearby population centres such as Vernon, Kelowna or are unable to return home if visiting.
100	Require transportation assistance	Time of day may impact a population who have no access to personal transportation.

2.5 Mass Evacuation Clearance Times

Vehicle occupancy	Community-wide evacuation in one direction	Community wide evacuation in two directions (FSR access required)
One	4hr 30min	3hr 45min
Three	1hr 30min	0hr 40min
Four	1hr 05min	0hr 28min

The assumed lane capacity for a single lane is calculated at 500 vehicles per hour. Allowance is given for official and mass transportation vehicles. Vehicle speed assumed 40km/h, with vehicles in good working order and residents "ready to go" and in vehicles. FSR lane capacity is estimated at 300 vehicles per hour with an assumed vehicle speed of 30km/h.

Evacuation clearance times are estimated based on the maximum number of people that may be in the area at one time. This number will vary depending on the area being evacuated, the time of year, time of day, etc.

2.6 Vulnerable Population Contact Information

EOC Action: To liaise and share any Evacuation Alert or Order information with all facilities listed.

Agency	Contact	Phone
Interior Health	Director on-call	1-855-851-4193
BC Emergency Health Services	General Line	911
Red Cross	Regional Coordinator	250-491-8443 ext 211
Red Cross	24hr Emergency Line	1-888-800-6493

2.7 Additional Contacts

Organization	Role	Contact Person	Phone Number
RDNO Duty Phone	Manager, Protective Services	██████████	██████████
Public Works			
RCMP	Staff Sergeant	██████████	
Silver Star Resort	Operations Director	██████████	██████████
Silver Star Property Owner's Association	President	██████████	██████████
Irrigation District			
MoTI	Operations Manager	██████████	██████████
	Manager of AOI	██████████	██████████
ESS	through the CRC	24hr emergency line	1-888-800-6493
	CRC Regional Coordinator		250-491-8443 ext 211
Okanagan Indian Band	EOC Director	██████████ ██████████	██████████
BC Wildfire	Kamloops Fire Center		250-554-5500
Vernon Search and Rescue		RCMP/EMBC	250-545-8732
Splatsin Indian Band (SIB)			250-838-6496
MoF	Engineering Tech	██████████	██████████
Animal Care (CDART)	██████████		██████████
	██████████	National President	██████████
BC Hydro			1-800-224-9376
Provincial Spill Reporting Call Centre**			1-800-663-3456
FortisBC			1-800-663-9911
Transport Canada – Canutec	Dangerous Goods		1-613-996-6666 *666
Telus			1-888-811-2323

IMPORTANT: EMBC PREOC can assist in contacting all utility providers and coordinating buses through BC Transit.

2.8 Transportation Options for Mass Evacuation

Company Name	Location	Fleet	Type of Vehicle	Capacity	Accessible (y/n?)	Primary contact (Name/#)
BC Transit			Public bus	31	Yes	
SD 22	Vernon/Coldstream		School bus	56		Tracey Syrota 250-570-9558
Vernon Taxi	Vernon		Car or Van	4-6		250-545-3337
Royal Stars Service	Vernon	1	Van	14	No	250-550-8128

Further investigation into options for mass transportation is needed.

2.9 Transportation Loading times (nominal)

Vehicle Type	Capacity	Loading Time per Person (minutes)	Loading Time (minutes)
Bus			
• Standard	35	1	30
• Shuttle Bus	10		15
Wheelchair Van			
• Hydraulic lift	8	5	30
• Ramp	3		15
• Ambulette	2 (wheelchairs)		
Ambulance Basic Life Support (BLS)	1 laying down 3 Seated	10	10
Ambulance Advanced Life Support (ALS)	1 Laying down 2 Seated	20 (if accompanied by life support equipment)	20

2.10 Events and Festivals

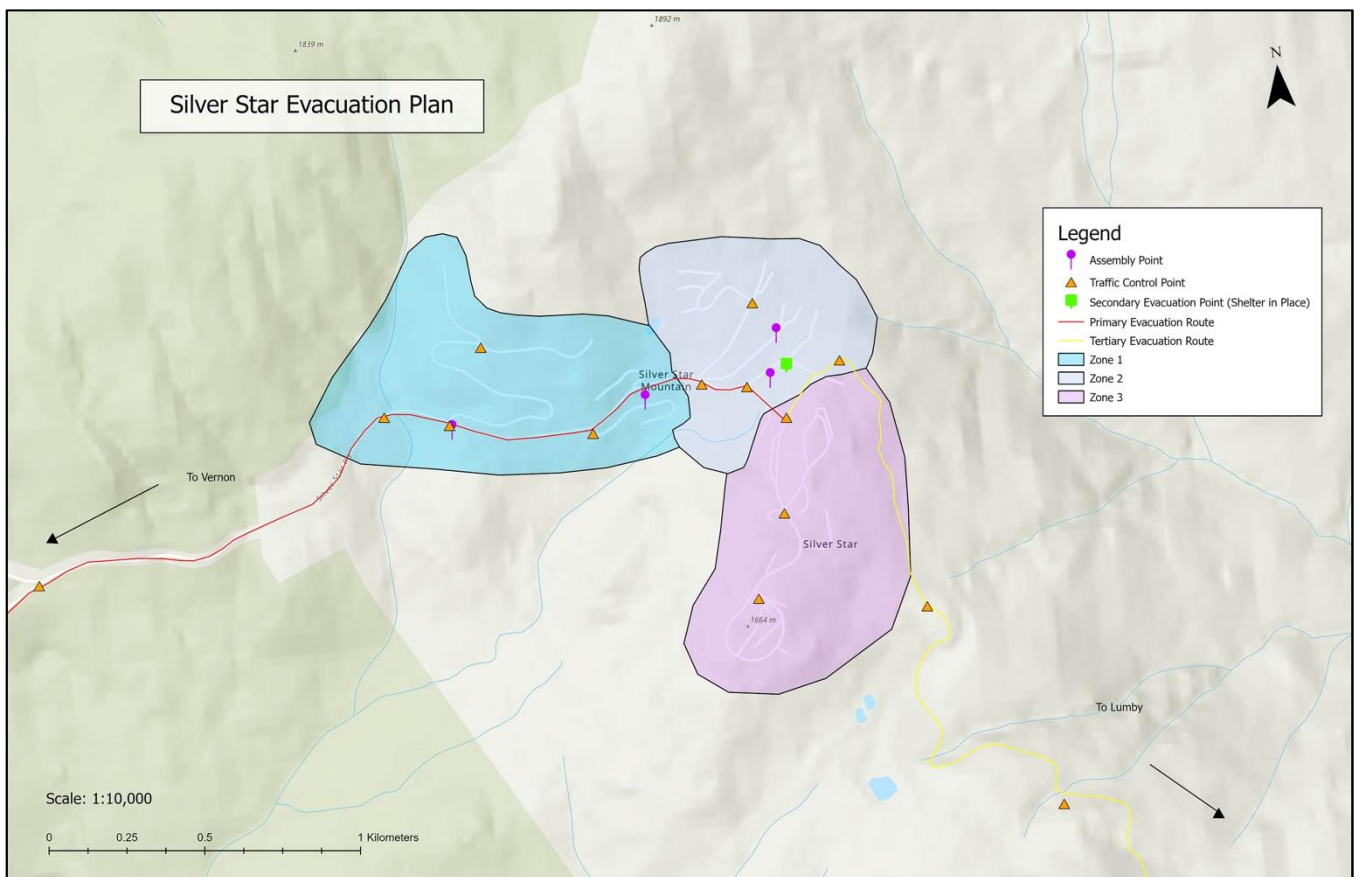
Event	Event Date	Location
Slay the Dragon	June 25, 2022	Village and surrounding trails
Okanagan 24 Race	July 2-3, 2022	Village and surrounding trails
Canada Cup	July 8-10, 2022	Downhill bike trails
Bombshell Enduro	July 23, 2022	Downhill bike trails
Silver Star Slopestyle	July 27-31, 2022	Downhill bike trails
Additional information: Visit https://www.skisilverstar.com/events/ for more information on current events schedule.		

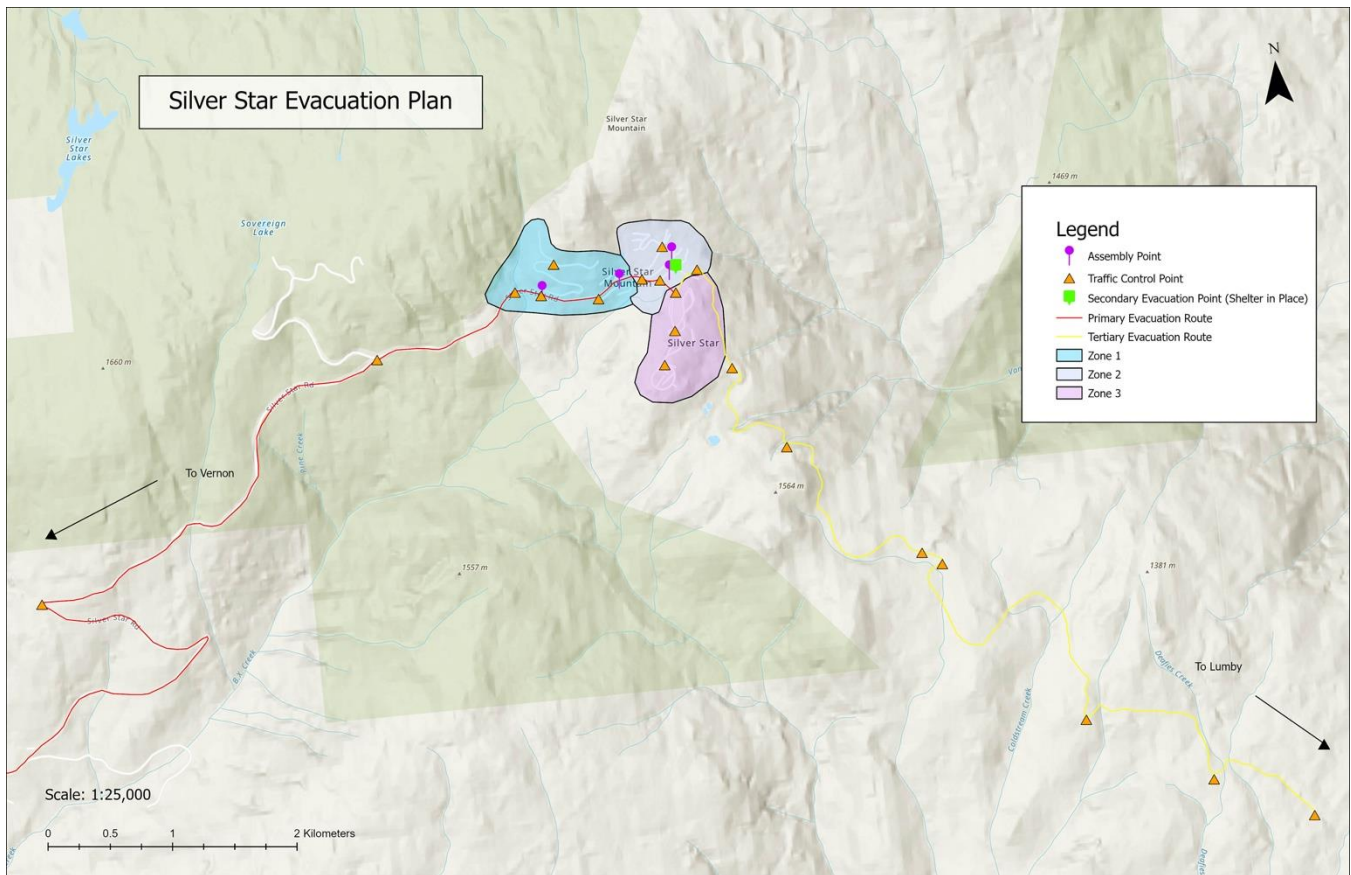
3 Evacuation Considerations

A hazard event in the Silver Star area has the potential to be complex and challenging given its remote location and limited options for access/egress. Proper considerations must be given to determining the best course of action (evacuation/shelter-in-place) as well as the appointment of supports such as traffic control, signage and assembly points (see Regional Evacuation Planning Framework).

While recommendations for placement of these supports have been made, adhoc planning may be required and adjustments made to meet the needs of the incident. KMZ files accompany this document and can be used to facilitate future adhoc evacuation planning and situational awareness.

3.1 Evacuation Routes





3.2 Forest Service Road (FSR) Access

3.2.1 Deafies FSR

Deafies FSR is owned by FLNRORD and numbered 0962 Section 08.

The first 6km from Silver Star Village are maintained by the resort, the remainder is maintained by the users under a Forest Service Road Maintenance Agreement.

As of May 23, 2022 the following companies hold Road Use Permits (RUPs)

- Primary – Monashee Community Forest (0.0-2.0km)
- Primary – BC Hydro (2.0-5.4km)
- Secondary – Woodlot WL 1908 (554210 B.C. Ltd) (0.0-1.2km)
- Tertiary – BC Hydro (0.0-2.0km)

Notes:

- Typically for estimating grading – a competent grader can grade, shape and crown 4km of FSR in 10hrs.
- Current funding and spending plan policy are not congruent to maintain the road to a high standard

- Legally, to erect any signage along an FSR, authorization by the Okanagan Shuswap District Manager must be obtained prior to installation.
- The legislation does provide MoF to issue a maintenance agreement to another agency authorizing them to do maintenance on the FSR however, the funding responsibility lies with the agreement holder for any maintenance work.
- When issuing a Road Maintenance Agreement MoF do not have the authority in their engineering policy to support access for emergency egress.

4 Evacuation Plan Template

Evacuation Routes	
Briefly describe Evacuation Routes:	
Neighbourhood Muster Points	
Neighbourhood Assembly Points for Car-less Evacuees	
Assembly Point	
Assembly Point	
Assembly Point	
Assembly Point	
Assembly Point	
Traffic Control Points	
Intersections requiring Traffic Control during Evacuation	
Traffic Control Point	
Traffic Control Point	
Traffic Control Point	
Traffic Control Point	
Traffic Control Point	
Traffic Control Point	
Perimeter Control Points	
Perimeter Control Points required after the Evacuation Order has been issued	
Perimeter Control Point	
Perimeter Control Point	
Perimeter Control Point	
Perimeter Control Point	
Perimeter Control Point	

Perimeter Control Point	
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Reception Centres

Primary Reception Centre:	
Secondary Reception Centre:	

People Requiring Assistance

The following residences have been identified that, if impacted, could increase the severity of the event, increase the time for recovery or have special requirement during evacuation

Address:	Disability:	Contact Name:	Contact Number:

Public Information

Attach all Press Releases (including Orders, Alerts, etc.) provided to the public.

Provide Public Information Line # if possible.

APPENDIX A. – Stakeholder Engagement

On May 5, 2022 the RDNO invited stakeholders for the Silver Star area to participate in a discussion-based exercise on evacuating residents and guests from Silver Star Mountain. The purpose of the exercise was to bring the various stakeholders together to discuss concerns, processes, roles and responsibilities to help inform the resulting operational evacuation guide.

Participants included: RDNO staff, Village of Lumby, FLNRORD, MoTI, Vernon SAR, School District 22, Silver Star Mountain Resort, Silver Star Property Owners Association, Tolko, and BC Wildfire Service. Sovereign Lake, RCMP and BC Parks were invited but unable to attend.

In Attendance		
1.	David Sewell	CAO/ EOC Director, RDNO
2.	Bill Borrett	Min. of Forest, Engineering
3.	Amanda Shatzko	RDNO Area C Director (Silver Star)
4.	Mark Forsyth	VSAR, Search Manager
5.	Norm Crerar	SS property owner assoc.
6.	Mike Waberski	President, SS property owner assoc.
7.	Ross Foden	SS property owner assoc.
8.	Michel Wooden	SS property owner assoc.
9.	Jessica Crick	Silver Star Mtn. Resort
10.	Brad Baker	Silver Star Mtn. Resort
11.	Melanie Wenzoski	EPC Village Lumby
12.	Aimee Barre	MOTI
13.	Craig Morrison	FLNRO Mtn resorts Branch
14.	Kelly Northcott	FLNRO Mtn resorts Branch
15.	Bill Hunter	Director, FLNRO Mtn resorts Branch
16.	Mike Scharf	BCWS
17.	Tracey Syrota	Transportation, SD22
18.	Mark Fichtner	RPF Tolko
19.	Alastair Crick	RDNO Manager, Protective Services
20.	Sharon Ilot	RDNO Clerk, Protective Services
21.	Amanda Newell	Consultant, Sundog Solutions
Unable to Attend		
19.	Troy Hudson	GM Sovereign Lake
20.	Steven Mancini	RCMP
21.		BC Parks

Discussion

The stakeholder engagement event focused primarily on reviewing hazards and alternative route options as well as the potential for shelter-in-place versus evacuation. The members of the Silver Star Property Owner’s Association (SSPOA) and representatives from Silver Star Mountain Resort, voiced concern over the option to shelter-in-place based primarily on the concern that the parking lots would

be full during peak season. While valid points were brought forward, it was evident that there is some misunderstanding of what a shelter-in-place would look like as well as the circumstances surrounding it. Additional planning and discussions surrounding how a shelter-in-place would be executed are advised as there is potential that this strategy may be the best option if the main route is unpassable.

The second dominating conversation during the workshop was surrounding the use of Deafies FSR, or any FSR for that matter, as an alternative evacuation route. While it does sound as though Deafies FSR could accommodate most vehicles, in order to formally designate it as a secondary evacuation route there would need to be a system in place to ensure its regular maintenance. Several options were discussed during the stakeholder engagement session but as outlined in section 3.9 of this document, someone would have to take ownership of maintaining the road and would need to apply for a Road Use Permit or a maintenance agreement with the FLNRORD. Additionally, authorization to install emergency signage must be authorized by the FLNRORD district manager.

While Deafies FSR is the most feasible option for a secondary egress route, the cost, resources, and liability that the RDNO would acquire should be carefully considered prior to taking the steps to designate this FSR as a secondary evacuation route. It is worth considering that preventative measures such as Fire Smart and fuel mitigation can significantly improve the safety of this community and efforts may be better directed to maintaining existing fuel breaks, treating the forest stand along Silver Star Road and running an aggressive public education campaign surrounding Fire Smart, emergency management and the responsibility of individuals to understand their risk and prepare accordingly.

Recommendations

Recommendation #1: Personal Preparedness Campaign

It was evident from the discussions at the stakeholder workshop that, while some good work has been done surrounding Fire Smart, residents have limited knowledge of how to prepare themselves for an emergency. It is important to educate and empower residents to learn about the hazards in their community and prepare accordingly. The RDNO is currently updating their emergency management webpage; along with that, a strategy for directing residents to review the information and take the necessary steps to prepare themselves and their household is imperative. Additionally, educating residents on the phases of an evacuation and the corresponding procedures will help ensure compliance and an efficient evacuation if necessary.

Recommendation #2: Shelter-in-place Planning

Discussions that took place with stakeholders uncovered a lack of understanding around why a shelter-in-place may be chosen over an evacuation and what that would look like. It would be helpful to complete additional shelter-in-place planning in partnership with the resort to ensure that there is a contingency option if needed and appropriate.

Recommendation #3: Feasibility Study for use of FSR's

While the discussion surrounding the use of Deafies FSR as a secondary route has been discussed several times, there has yet to be an entity that is willing to take on the responsibility of maintaining the road for the purpose of an evacuation route. The workshop afforded the group the opportunity to discuss the matter with all parties present which provided a shared understanding of the steps required to designate the road as an evacuation route. Although the consensus remains that Deafies FSR appears to be the most viable option for a secondary egress from the mountain, it will remain with the RDNO to determine whether they are willing to take the necessary steps to designate it as such.

Recommendation #4: Fuel Mitigation and Community Wildfire Resilience Planning

Continue to update Community Wildfire Resilience Planning and bring in Wildfire Specialists and Registered Professional Foresters (RPFs) to develop recommendations and prescriptions for mitigating existing wildfire risk to the community as well as Silver Star Road.