Rural Evacuation Route Plan
Kingfisher/Mabel Lake

Prepared for:
The Regional District of North Okanagan

Developed and Prepared by:
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Glossary

BCEMS   BC Emergency Management System – A comprehensive framework that helps to ensure a coordinated and organized approach to emergencies and disasters. The standard practice provincial government ministries and Crown corporations; it is the recommended best practice for all emergency management stakeholders in BC and applies to emergencies, disasters, and catastrophic events

CC   Community Contact

CS   The department of Community Services responsible for emergency preparedness and transit

DS   Development Services Department for the RDNO including Planning, Building Inspection, and Bylaw Enforcement

ECC   Emergency Coordination Centre (EMBC)

EMBC   Emergency Management BC – the provincial coordination and support body for emergency management within the province

EOC   Emergency Operations Centre – will be located in Vernon. Location or facility where responsible officials gather during an emergency to direct and coordinate emergency operations

EPA   Emergency Program Act

ESS   Emergency Support Services including Reception and Shelter Services

Evacuation Alert: To inform the affected population of a potential or impending threat to their safety – allows for at-risk populations extra time to evacuate

Evacuation Order: A formal written document under which the impacted population is ordered to evacuate the area specified immediately

Evacuation Rescind: Notice issued when the emergency which necessitated the evacuation is under control and the hazard/emergency zone is declared safe

Evacuation Zone: Larger area surrounding the Hazard Zone, in which residents are evacuated to remove them from the potential or actual threat to their safety or health

FLNRORD: Ministry of Forest, Lands and Natural Resources Operations and Rural Development

Freshet	The period of time when rivers swell from snowmelt, generally April to July. Freshet flooding occurs when atmospheric conditions lead to rapid snowmelt and normal stream channels become overwhelmed.
GL	Group Lodging (ESS)
Hazard	Events or physical conditions that have the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural loss, damage to the environment, interruption of business, or other types of harms or losses
Hazard Event	A hazard that has already materialized and is impacting people or property (e.g. a hazardous waste spill, structure or interface fire within the community).
Hazard Threat	A hazard that may occur, but that has not yet impacted people or property (e.g. rising water level or a wildfire approaching the interface)
Hazard Zone	Area under direct threat with a high degree of risk to persons or property. There is to be no occupancy or staging within the hazard zone
HEMBC	Health Emergency Management British Columbia
IC	Incident Command
ICS	Incident Command System – A standardized on-site management system designed to enable effective, efficient incident management by integrating a combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure
IHA	Interior Health Authority
MoTI	Ministry of Transportation and Infrastructure – responsibility for roads and storm drainage in the rural areas of the RDOS
PECC	Provincial Emergency Coordination Centre
PREOC	Provincial Regional Emergency Operations Centre
PW	The Public Works Department for the RDNO including water, wastewater and solid waste.
RCMP	Local detachment of the Royal Canadian Mounted Police – authority for policing and security
Risk	Likelihood x consequence

Shelter-in-Place   The act of ordering people to stay indoors, rather than physically evacuating from the community. Most often used in order to reduce exposure to airborne contaminants, or in the event of an active shooter or terrorist attack

SOLE   State of Local Emergency

Strategic Evacuation   Pre-planned evacuations in response to hazard events that provide adequate warning and preparation time. Uses the "Three Stage Evacuation Process": Alert, Order, Rescind

Tactical Evacuation   An evacuation resulting from a hazard impact that forces immediate action thereby allowing little or no warning and limited preparation time. Ordered at the site level by the Incident Commander

RDM   Regional Duty Manager

RDNO   Regional District of North Okanagan

Introduction

Context

The Regional District of North Okanagan (RDNO) faces multiple hazards that could lead to a large-scale evacuation or shelter-in-place requirement including wildfire, flood, debris slide and windstorms predominantly. Through consideration of current risks, hazards, and response challenges, the RDNO chose to focus evacuation planning efforts on the rural community of Kingfisher/Mabel Lake and its single access transportation corridor. The experience both within the RDNO as well as other municipalities has shown the importance of having a plan in place to facilitate the rapid organization and implementation of an evacuation or shelter-in-place initiative.

Based on this context, the RDNO identified the need to create and maintain an Evacuation Route Plan to guide the planning and coordination of an evacuation or shelter-in-place response for the rural, lakeside community of Kingfisher/Mabel Lake. To achieve this, the RDNO applied for a grant, offered by the UBCM; Frontline Operations Group Ltd. was the chosen proponent to complete the project and was formally issued a contract to prepare the Evacuation Route Plan in April 2019.

Emergency planning is a dynamic process. This Evacuation Route Plan is only one part of preparedness efforts that include training, exercises, and the debriefing of actual events. As the Kingfisher/Mabel Lake community evolves, so will the Evacuation Route Plan, which will be regularly reviewed and adapted by the RDNO. Due to the nature of major emergencies, there may be a need to adapt the plan during an evacuation or shelter-in-place. Therefore, this plan acts as the foundation for continuous planning efforts rather than a final, rigid solution. This plan builds on the existing Emergency Response Plan and Procedures for the RDNO as well as the Standard Operating Procedures established by EMBC.

Plan Structure

This plan is divided into two parts:

- The Evacuation Route Plan describes in detail how an evacuation or shelter-in-place incident will be planned and implemented. This part of the plan is designed to be used during training activities, and for public reference.

- The Operational Response Guide is designed for use during an evacuation or shelter-in-place incident. This guide is a set of planning and position checklists designed for use by municipal staff and stakeholders directly responsible for implementing an evacuation.

Purpose

The purpose of the Evacuation Route Plan ("the Plan") is to describe the provisions that have been made, and the procedures that follow, to ensure the safe and orderly evacuation of people and animals threatened by a natural or man-made hazard within the specified boundaries. The Plan will also establish the principles, structures, roles and responsibilities for a coordinated partial or full evacuation of the Kingfisher/Mabel Lake area. The Plan specifies arrangements, agency roles and responsibilities, and a range of considerations and actions for the evacuation of people from a hazardous community environment to a location where they will be safe.

This plan should be read in conjunction with the following:
- Area F Emergency Response Plan (RDNO, 2003)
- Evacuation Operational Guide for First Nations and Local Authorities in BC: A guide to managing evacuations during emergency response (EMBC, 2019)

Objective

The objectives of this plan are to:
- Describe how the RDNO would organize itself to plan and coordinate the evacuation or shelter-in place for part of or the entire community of Kingfisher/Mabel Lake
- Provide the specific tools such as position checklists, planning templates, etc. that will be used during the planning and coordination of an evacuation or sheltering-in-place event

The protection of life, livelihood and critical infrastructure is the key principle and the primary objective of this evacuation planning effort.

Vision

The vision for the Plan is:
- For all agencies in the RDNO with jurisdiction, responsibility, or resources for evacuation in Electoral Area F to come together and collaboratively develop an evacuation process and plan to effectively evacuate part of or the entire community;
- It will be based on realistic scenarios, strategies, resources and timelines, so it will be effective in practice;
- That all agencies with a role in the execution of the Plan will be included in its development and have a clear understanding and a shared approach to evacuation planning;
- To enable evacuations to be executed effectively in a coordinated manner; and
- To demonstrate communities and agencies coming together to protect and service the public in times of emergency.

Scope

The Kingfisher/Mabel Lake Evacuation Route Plan outlines the process and the resources needed to complete an evacuation of all or part of the community with considerations for properties along the transport corridor. The various identified routes include those to the west, east and north. The plan considers all hazards, meaning the plan and process is not specific to one hazard, but can be implemented for any hazard requiring the complete or partial evacuation of the Kingfisher/Mabel Lake community. The plan can be implemented for a hazard threat or a hazard incident and can be used to facilitate evacuation scenarios that provide advanced warning or those that provide no notice and pose an immediate threat.

In light of the recent COVID-19 pandemic, it should be noted that additional precautions will be taken to reduce virus transmission and protect the health of responders and residents alike. Best practice guidelines for evacuation planning during a pandemic will be used to guide this process and are contained in a document separate to this plan.
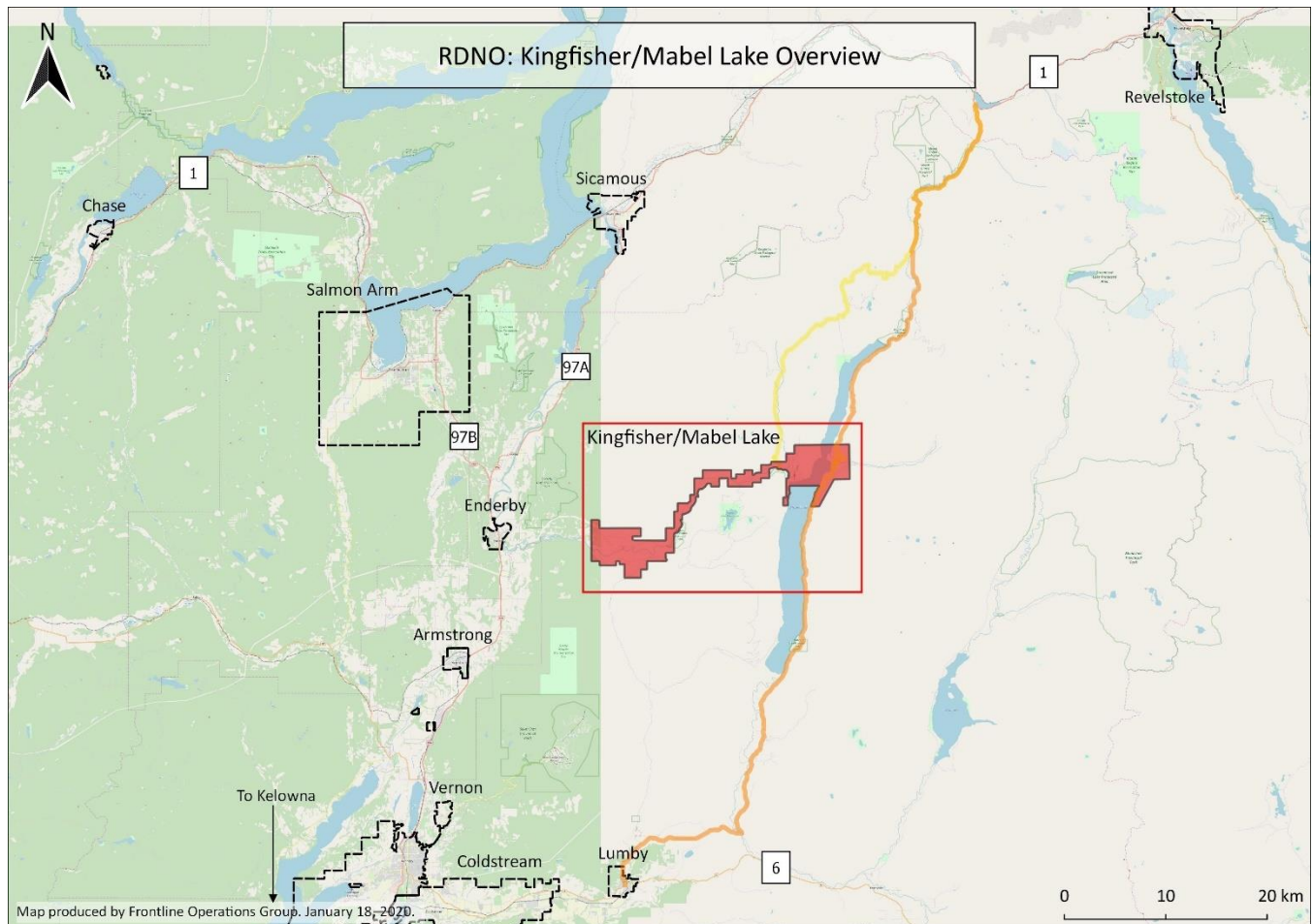
The Kingfisher/Mabel Lake Evacuation Route Plan should be used in conjunction with the existing Emergency Response Plan for Area F. It is recommended that the RDNO develop an updated, and comprehensive Emergency Response and Recovery Plan, that can be implemented

during emergency events and provide specific response actions for communities under the jurisdiction of the RDNO.

Area F Emergency Response Plan. The Area F Emergency Response Plan provides an overview of critical infrastructure, resources and response capabilities for rural areas throughout Electoral Area F of the RDNO. The plan also outlines potential evacuation routes, safe zones, and population information. This plan is accompanied by maps for the previously identified zones, F80 – F88.

Emergency Response and Recovery Plan. The all-hazard Emergency Response and Recovery Plan would describe how the RDNO will receive communication about potential emergencies, evaluate those emergencies and activate Site Command and/or the Emergency Operations Centre to coordinate the response. This can occur centrally, via the Emergency Coordinator or on-site via first responders. The plan would also assign responsibilities for specific emergency functions, all of which would complement those dictated in the Evacuation Route Plan.

Evacuation Route Plan. The Evacuation Route Plan describes who will coordinate an evacuation initiative and how the decision to evacuate or maintain the status quo is made; how the area to be evacuated is determined; and how the following functions will be coordinated:
- Perimeter and access control
- Evacuation routes and traffic control
- On-site notification
- Liaison with ESS, FLNROD, RCMP, and other external agencies
- Transportation
- Guidance to self-evacuating citizens
- Pet and livestock evacuation and care
- Zone clearance
- Re-entry planning – rescind, initial actions: contact interior health, rapid damage assessment, utilities reinstated
- Security

What is beyond the scope of the Evacuation Route Plan? The Plan will discuss, but not describe in detail:

- Plans for opening and managing reception centres (this is the responsibility of ESS and should be addressed in the Emergency Response Plan)
- Plans for sheltering outside of Kingfisher/Mabel Lake (the initial actions for hosting community has been included)
- Transportation and sheltering options for animals and livestock relocation
- Plans for coordinating mass notification with the media

Authority

Authority to implement a mandatory evacuation within the Kingfisher/Mabel Lake boundaries rests with the RDNO. The Emergency Program Act states that:
"a local authority is at all times responsible for the direction and control of the local authority's emergency response".

The legal authority most commonly used by local authority officials to order an evacuation is the Emergency Program Act (1996) Section 12(1)[1]. To order a mandatory evacuation, a local authority must declare a State of Local Emergency (SOLE), as presented under Section 12 of the *BC Emergency Program Act*.

Under this section a local authority council via bylaw, resolution or by the order of the head of the local authority, is permitted to declare a SOLE giving legal power to "cause the evacuation of persons and the removal of livestock, animals and personal property that is or may be affected by an emergency or disaster and make arrangements for the adequate care and protection of those persons, livestock, animals and personal property."

In the RDNO, typically the RCMP on behalf of the Regional Government, will action an evacuation order. In some instances, local SAR volunteers and/or First Responders will also be used to support the RCMP.

> **For advice or assistance with an evacuation, contact EMBC's 24/7 Emergency Coordination Centre at 1-800-663-3456 and request to speak with the Regional Duty Manager for your region, or PREOC, if activated.**

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[1] The Provincial Emergency Program Act is currently in the process of being updated. Any changes to the act that pass after the finalization of this plan will need to be incorporate when available.

Alternate Measures of Authority

Not all evacuations require a declaration. In many cases it is preferable to utilize the existing statutes of other authorities and reserve declaring as a last resort. The decision will vary depending on the type of threat and the amount of time available before safety to the public is at risk.

Other authorities may include:

Agency	Legislative Measure
Emergency Program Act ***currently being updated**	Section 12(1) of the Emergency Program Act permits Council via bylaw or resolution, or the Mayor by Order, to declare a local state of emergency. This then allows implementation of procedures to protect people and resolve the emergency, including evacuation 13(1). Section 9(1) of the Emergency Program Act permits the Solicitor General to declare a provincial state of emergency. Under a provincial declaration, the Solicitor General has the authority to order an evacuation as deemed necessary.
Criminal Code of Canada	The *Criminal Code of Canada* authorizes the RCMP to evacuate buildings or areas for criminal investigations or activities (i.e. bomb threats, hostage taking, drug laboratory, etc.). The RCMP have the authority to arrest and charge individuals who are obstructing the evacuation process or hindering emergency responder's in the performance of their duties.
Environmental Management Act	Section 80 (2.1 c) of the Environmental Management Act enables an officer (usually a Conservation Officer) to take whatever action is necessary to address a spill that has occurred that may pose a hazard to health or the environment including evacuate persons.
Fire Services Act	Section 25 (1) of the Fire Services Act enables the Fire Commissioner to evacuate a building or area due to threat from fire or explosion.
Forest Practices Code of British Columbia Act	Section 85 (1) of the Forest Practices Code of British Columbia Act enables a designated forest official to, by order, require a person to leave an area specified in the order if the government is engaged in fire control or suppression operations.

Highway Act	Section 23 of the Highway Act allows the Minister of Transportation to close highways for the protection of persons using the highway, or to enable permitted traffic to be handled safely and expeditiously.
Petroleum and Natural Gas Act	When the [Oil and Gas] commission believes that, because of hazardous conditions in a field or at a well, it is necessary or expedient to close an area and to shut out all persons except those specifically authorized, the commission may make an order in writing setting out and delimiting the closed area.
Public Health Act	Section 63 (161) of the Public Health Act allows Minister of Health or any medical health officer to order a person, or persons, to remain in a specified place, or not enter a place, to prevent the transmission of an infectious agent or a hazardous agent (i.e. epidemics, pandemics).
Wildfire Act	Section 11 of the Wildfire Act enables the Minister of Forests, Lands, and Natural Resource Operations to designate, by order, a specified area as a restricted area for a specified period if the minister considers it necessary or desirable to limit the risk of a fire, to address a public safety concern or to avoid interference with fire control.
Workers Compensation Act	Under the Workers Compensation Act, WorkSafeBC can evacuate a workplace, and isolate it with fences, barricades, etc., if it reasonably believes that an immediate danger of serious injury, illness or death exists.

Situation

Kingfisher/Mabel Lake is a low density unincorporated rural community relying mostly on tourism to fuel local economy. Developed at the westerly mouth of the Shuswap River on Mabel Lake, the community is located 37km east of the City of Enderby. The resort community consists of full-time, seasonal and recreational residences. Summer is high season, bringing with it a dramatic influx of seasonal residents and visitors.

The Kingfisher/Mabel Lake area has been defined as either side of the Shuswap River between "Halfway Hill" or the Shuswap River Islands Park, to the shores adjacent to the outlet of Mabel Lake into the Shuswap River. There are limited private land holdings in the area; residential and community development has primarily been on the north side of the Shuswap River, with crown lands occupying most land above the valley bottom. The western portion of the plan area is predominantly rural and agricultural consisting of forage crops such as hay and alfalfa as well as pastureland for livestock dominate the agricultural uses.

The eastern border of the plan area is Mabel Lake. The lakeshore has been developed as two distinct areas separated by the Shuswap River. The north side is accessed by the Enderby Mabel Lake Road and consists of Mabel Ridge Estates, Mabel Lake Resort and its ancillary developments, the airstrip, river mouth marina and a handful of private lakeshore cabin lots. North of Mabel Ridge Estates, there is very little private land on the lakeshore within the plan area. The south west side consists of cabins and seasonal residential lots and a youth camp (Camp McKenzie), which are primarily accessible by boat. There is at least one pontoon boat that serves as a water taxi and garbage collection service. There is no public access road to the homes on the south west side although there is access via an active logging road that would be passable in an emergency back through the Hidden Lake area.

The Evacuation Route Plan will also focus on the main transport corridor in and out of the Kingfisher/Mabel Lake resort community. Despite the fact that overall traffic volumes on Enderby Mabel Lake Road are well within capacity for the engineered design of the road, there are still concerns about pedestrian and cyclist safety and the general condition of the road surface. Additionally, there is high potential for the road access to be compromised due to flooding and/or debris slide which would result in the need for resources to be brought into the community while the road is repaired or evacuate residents and visitors via alternative routes. It should also be noted that east of Ashton Creek there is no cell phone service which will require additional planning on communication procedures during emergency response and evacuation. Another notable challenge is the absence of an organized Fire Department within the Kingfisher/Mable Lake community. The BC Wildfire Service (BCWS) will respond to wildfires within and around the community but do not participate in structure fire suppression.

Wildfires have been a regular and natural disturbance agent through the Shuswap-Okanagan region. In recent years, the RDNO has felt the effects of several wildfires, ranging from small fast-moving fires that are contained relatively quickly, to prolonged periods of large fires burning in the surrounding area. The Regional District's unique characteristic of encompassing several different fuel types, from southern dry-interior (Pondarosa Pine and Douglas Fir) to northern interior wet-belt (Cedar), creates varying degrees of wildfire behaviors.

During the 2018 fire season, the Monashee Complex – including the Mabel Creek fire – resulted in prolonged smoke exposure and evacuation alerts for the RDNO. Fortunately, the Regional District and the Kingfisher/Mabel Lake community have been spared the wide-spread destruction of homes that other areas of the province have experienced.

Review of Hazards

The Evacuation Route Plan is considered "all-hazard" meaning the evacuation process and plan can be used to coordinate a partial or full evacuation for any threat or hazard. Although the plan can be implemented for any or all hazards, a review of the hazards that could necessitate an evacuation of the community and/or restrict the access and egress to the community on Enderby Mabel Lake road, was included in the planning process. This review informed the potential scale of evacuation, the intensity of the event, the amount of time between the onset and the need for evacuation, and specific considerations for each hazard.

🔥 NATURAL HAZARDS				
Hazard	**Frequency/ Likelihood**	**Onset**	**Responding Agency**	**Considerations**
Fire – Interface	Moderate	Slow or sudden	BC Wildfire Service (BCWS)	
Overland flooding	Moderate	Slow or sudden	MoTI for flooding affecting roadways and associated bridges. FLNRORD for all waterways and bodies of water. Private land is the responsibility of the owner. RDNO will provide information and ESS support.	Overland flooding could would most likely result from a debris slide or creek breach along Enderby Mabel Lake Road.
Fire- Structural (Urban/Rural)	Low frequency	Sudden	No local Fire Department	BCWS only responds when interface/forest is at risk. They do not suppress structure fires
Windstorm	Moderate	Slow or sudden	Debris management for the road clearing is MoTI. Utility and communications cables – utility owner	
Debris Slide	Moderate to High	Sudden	Multiple depending on affected area. FLNRORD and MoTI primarily.	Limited areas for turn-around. Can isolate the community
Loss of Essential Services or Critical Infrastructure	Low to Moderate	Sudden	RDNO, EMBC	Extended interruption to electrical power, water, sewer or loss of community access and egress. (Sub station, fuel, pumphouse)

HUMAN-CAUSED				
Dangerous goods release	Low to moderate	Sudden	MoTI, Ministry of Environment, BCEHS, RDNO, ECC, Product owner	Likely caused from an MVA involving the transport of dangerous goods
Hazardous substance spill or release	Low to moderate	Sudden	Ministry of Environment, Product owner, RDNO	Response could include shelter-in-place; most likely involving aviation or boat fuel
Disease	Low to moderate	Sudden or Slow	HEMBC	

Hazards of Note

While the plan can be used for any hazard requiring a full or partial evacuation of Kingfisher/Mabel Lake area, there are specific hazards that are of concern to the community and extra consideration was given to them during the planning process.

Wildfires and Wildland Urban Interface Fires

Kingfisher/Mabel Lake is located within an area characterized by frequent wildfire occurrence. The community is surrounded by dense forest that acts as a large fuel hazard and increases the potential of a wildfire to spread into the community. Wildfires in the immediate area surrounding the community, however, are likely to trend towards slow growth and remaining relatively small (<1ha), unless subjected to extreme fire hazard situations impacted by weather patterns.

The 2018 Wildfire season illustrated how fires in this fuel type can grow aggressively when the ideal conditions are presented. The Mabel Creek fire, discovered on July 31, ignited approximately 9km east of the Mabel Lake resort community due to lightning strike produced by local thunderstorms. The fire's final size was tracked at 1,370.4ha. Several other smaller fires burned around the Kingfisher/Mabel Lake area at the same time and all, including the Mabel Creek fire, were included within the Monashee Complex – which was established to manage the high volume of fires burnings within the eastern portion of the RDNO. These fires resulted in prolonged smoke exposure, area closures and evacuations alerts throughout the Regional District of North Okanagan.
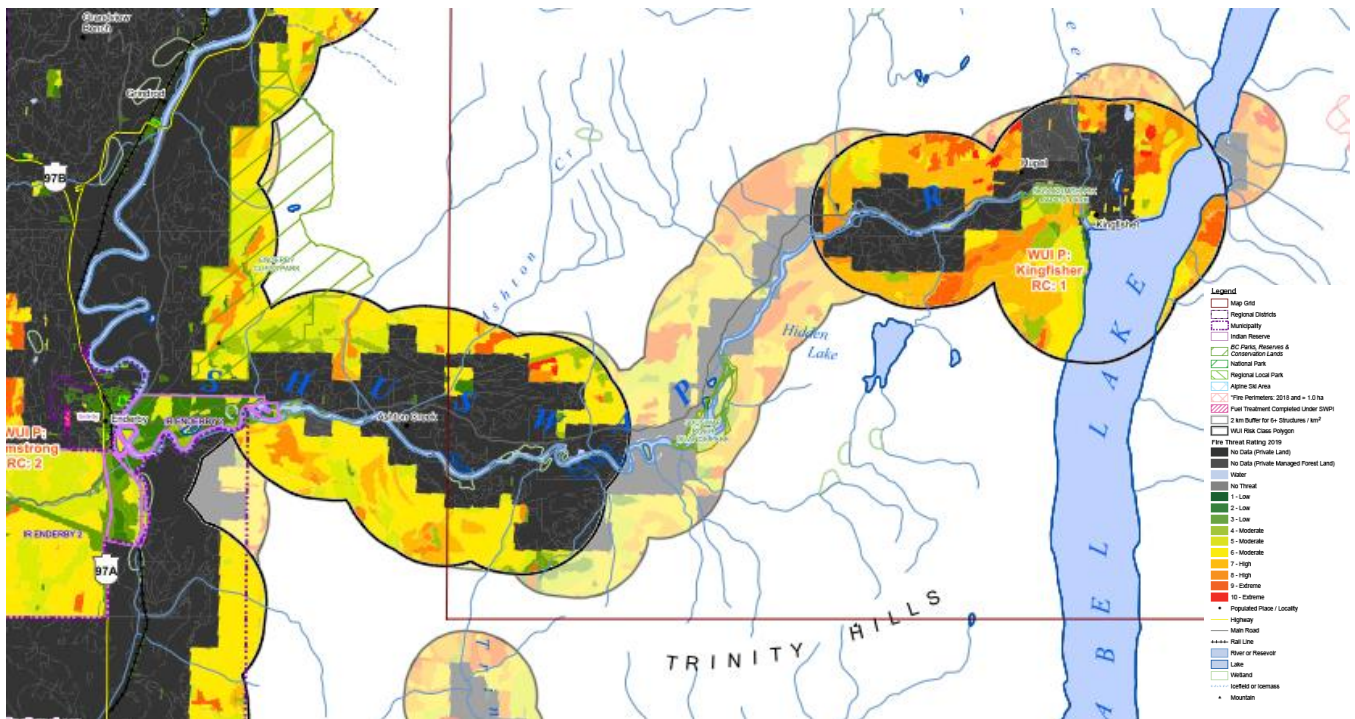
Figure 1 The AOI of Kingfisher/Mabel Lake community; close proximity to the wildland fire environment creates an opportunity for wildfire to spread into the community boundary

The RDNO recently updated part of the Community Wildfire Protection Plan (CWPP) in January 2019 and expect to the complete the remainder of the update in 2020/2021. The assessment analyzed wildfire threat within a 2km buffer around the local government's boundary. During the development of the CWPP the provincial fuel type geospatial layer was analyzed. The resulting CWPP fuel type map demonstrates that most of the Kingfisher/Mabel Lake AOI is comprised of a combustible fuel type, with a mixture between C5, D-1/2 and M1/2, and therefore has a close relationship with the wildland fire environment.

The possibility of firebrands (embers) being transported from a nearby wildfire and igniting spot fires within the community should not be discounted and highlights the importance of homeowners taking proactive FireSmart measures to reduce potential fuel sources around their property. The Kingfisher/Mabel Lake area is fortunately situated predominantly in C5 fuel type, creating a low risk of firebrand production and transportation. Fire behaviour within C5 fuel types typically trend towards solely ground and subsurface fires due to the lack of ladder fuels available to transfer fire into the aerial fuels. In addition, the presence deciduous species found within the D-1/2, and M1/2 stands bodes well for the community as these species are naturally resistive to wildfire.

Weather conditions and trends were also analyzed and presented in the Regional District of North Okanagan CWPP, specifically the number of Fire Danger Class 4 & 5 days calculated for several BCWS fire weather stations in the RDNO area. Interestingly the Mabel Lake 2 fire weather station presented here shows a decreasing annual trend of danger class 4 and 5 days. Given the overall trend in the RDNO of increasing danger class 4 and 5 days, including neighboring weather stations – Salmon Arm and Curwen Creek – in similar fuel types it can be presumed that there may be a possibility that the data being collected from Mabel Lake is inaccurate. Poor maintenance resulting

in new vegetation growth around the weather station, thus providing increased humidity and shade, could be one example as to why the data is inconsistent with neighboring weather stations.
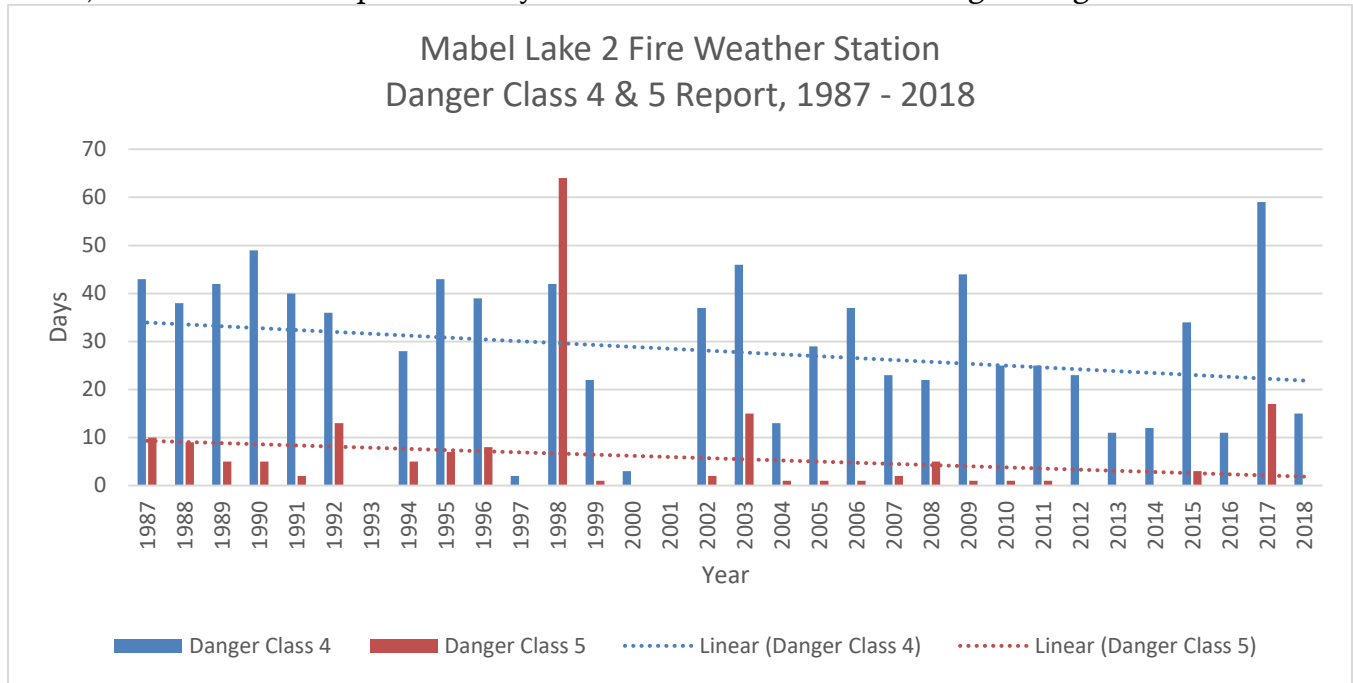

Figure 2 The number of Fire Danger Class 4 and 5 days, per year since 1987 for the Mabel Lake 2 fire weather station. Located approximately 23km south of Kingfisher
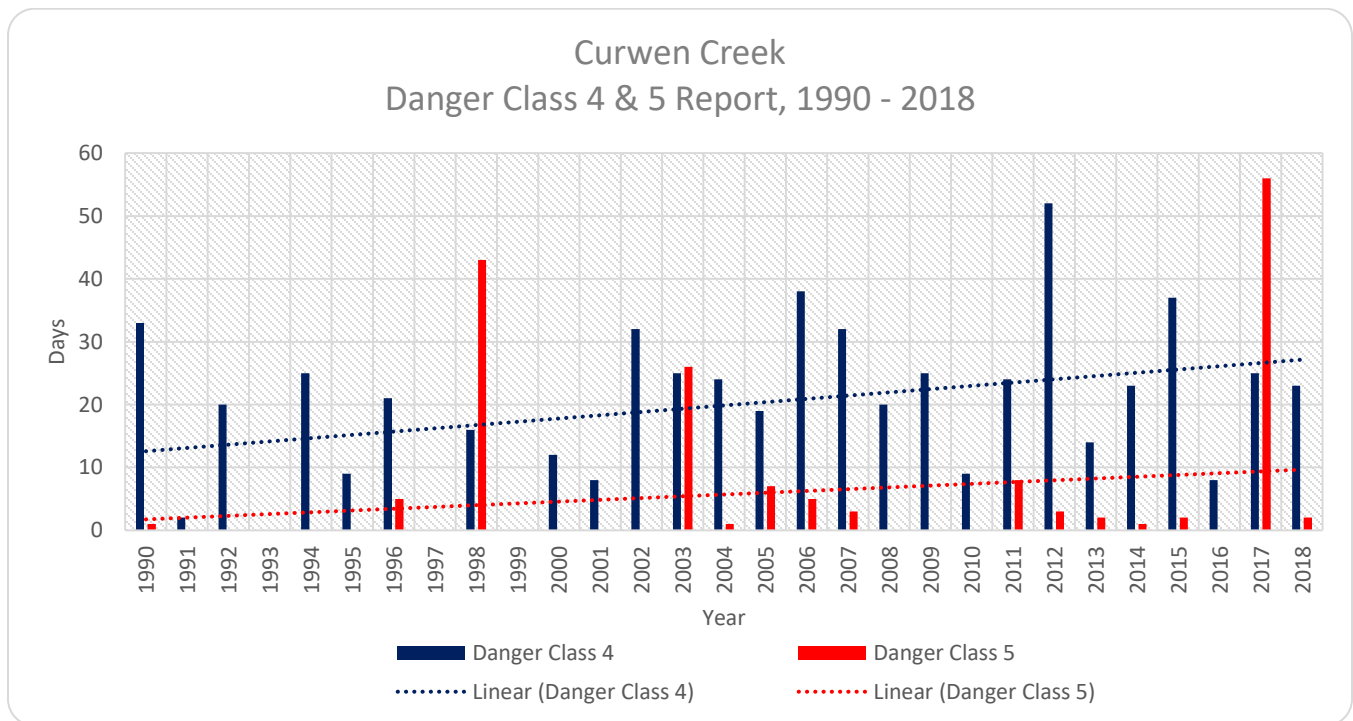

Figure 3 The number of Fire Danger Class 4 and 5 days, per year since 1990 for the Curwen Creek fire weather station. Located approximately 21.5 km east of Kingfisher
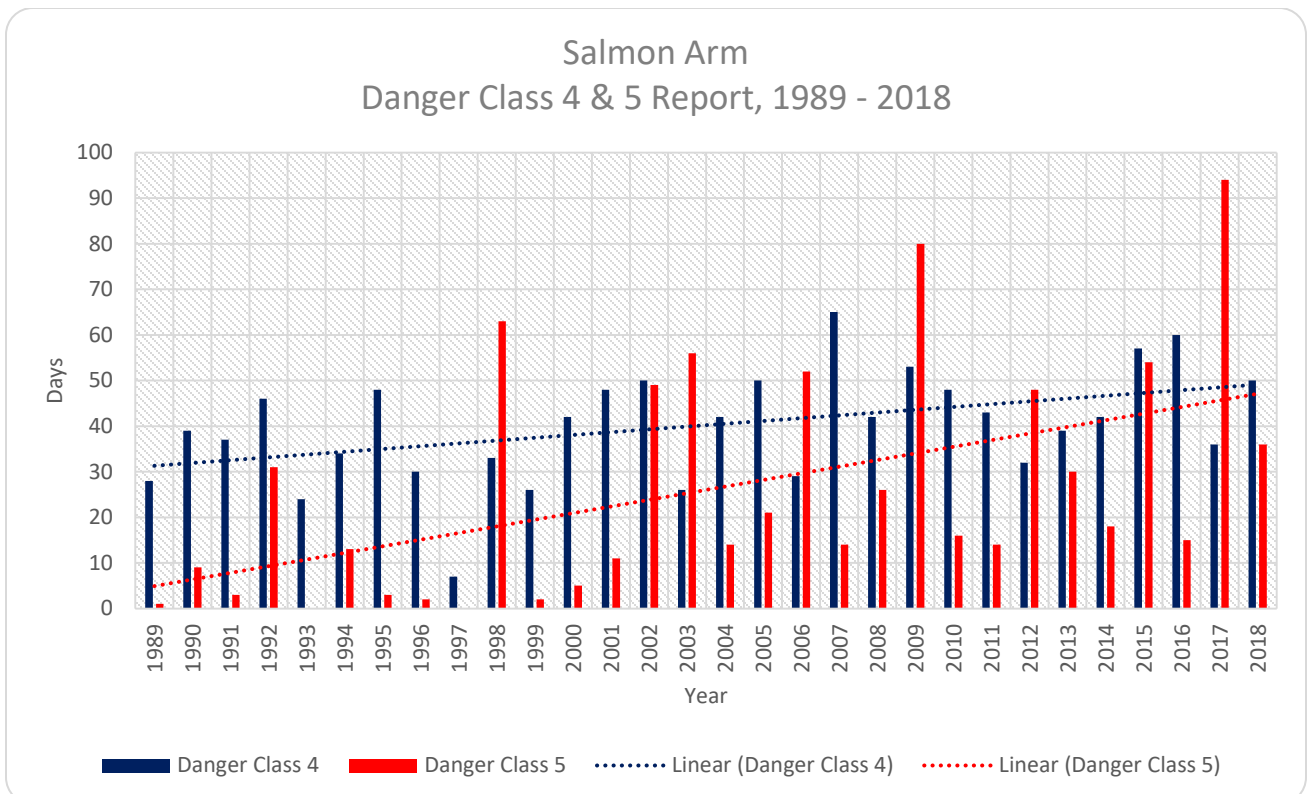
Figure 4 The number of Fire Danger Class 4 and 5 days, per year since 1989 for the Salmon Arm fire weather station. Located approximately 37 km west of Kingfisher

Under plausible worst-case scenarios, using fire weather data from the Mabel Lake 2 weather station and Kingfisher/Mabel Lake climate normals, resulting fire behaviour in the surrounding area is predictably extreme. In the C5 (Red and White Pine) * fuel type, with 40km/h wind in alignment with a 30% slope, the equilibrium rate of spread (ROS) is greater than 30m/min and a head fire intensity (HFI) in excess of 10,000kW/m. This worst-case fire behaviour prediction pushes the limits of the FBP model but provide an illustration of potential extreme fire behaviour in the Kingfisher/Mabel Lake area.

Historical data collected for the area, however, shows that the ideal conditions for extreme wildfire behaviour has previously occurred within the area. The highest Fire Weather Index (FWI) recorded for the area predicted fire behaviour of a ROS of 30m/min with an HFI of >10,000kW/m, a situation in which continuous crown fire would have likely been seen. This situation was mainly due to a high wind speed of 46km/hr which significantly increase the Initial Spread Index (ISI). The second highest FWI, recorded in 2003, provides a depiction of extreme fire behaviour conditions resulting from drought and fuel loading. According to the numbers, fire behaviour would have demonstrated a ROS of 14m/min with an HFI of >10,000kW/m and would have demonstrated intermittent crown fire. Both situations did not account for slope in which fire behavior would increase.

In assessing and recommending potential evacuation requirements in relation to a wildfire in proximity to Kingfisher/Mabel Lake, careful consideration is required. While there is a potential of a wildfire spreading into the community boundary and becoming a threat to the public, potential evacuation routes could put people into closer proximity with hazardous wildland fuels and dangerous wildfire behaviour. Prior to making any decision to evacuate people during a wildfire,
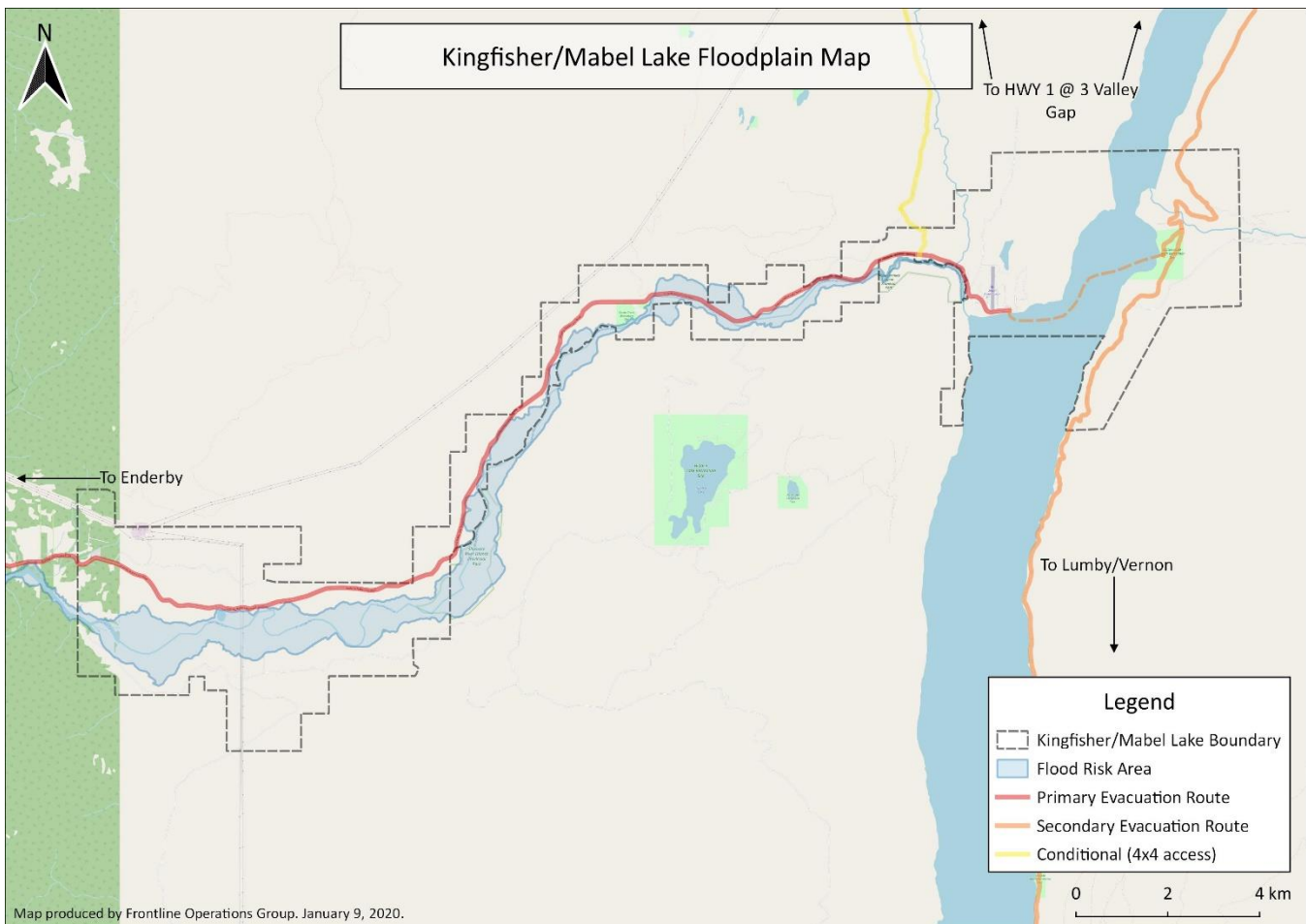
careful assessment of the evacuation route(s) in relation to the potential for wildfire to impinge on the route(s), must be conducted.

The Enderby-Mabel Lake Rd. from Ashton Creek is the primary access/egress route for the Kingfisher/Mabel Lake community. The corridor winds along the valley bottom following the Shuswap River closely. Wildfire hazard along this route should be considered for two reasons: 1) potential threat to evacuating public, and 2) potential threat of community isolation. Majority of the fuel load that would impact access/egress is located on the northern edge of the road (see Figure 3) with primarily C5 to the east and C7 (Interior Douglas Fir) to the west. "Non-fuel" types along the road can be attributed to developed agricultural lands and low-vegetation along the riverbed – providing a fuel break between the road and continuous forest stand. As noted, wildfire in C5 fuel types typically trend towards slow growth and increased difficulty in ignition. Wildfires, however, in this fuel type can become more establish and harder to fully extinguish, due to the depth of the organic ground layer and fuel densities. Wildfires in C7 fuel types typically trend towards quicker growth with easier ignitions, due to the abundance of fine fuels. These fine fuels, conversely, take less time to burn out.

* Classifying fuel complexes in BC according the FBP fuel types is an imperfect process, given the diversity of ecosystems in the province in comparison to the rest of Canada. When considering FBP fuel types for a particular fuel complex, the actual species composition is of less importance than the overall stand structure characteristics. The FBP fuel types referenced above specify certain species not found in BC (e.g. red pine and eastern white pine, etc.), however the overall structural characteristics of the fuel types share similarities with the Kingfisher/Mabel Lake site conditions.

Overland Flooding and Debris Slides

The Kingfisher/Mabel Lake community is located on the western bank of Mabel Lake, at the outlet of the Shuswap River. The river flows out of Sugar Lake into the southern end of Mabel Lake which is oriented roughly north to south and is approximately 35km long. The community is accessed by Enderby Mabel Lake Road, a two-lane road that connects the community to the City of Enderby. The area's climate and landscape mark the transition from the Okanagan Basin to the Quesnel/Shuswap Highlands. To the west, the slopes of the Thompson Plateau are covered in Ponderosa Pine and Douglas Fir, while on the east side of Mabel Lake, the wetter and steeper slopes of the Shuswap Highlands grade into the Monashee Mountains. The area around the lake is mountainous and sparsely populated, boasting several provincial parks and recreational sites.

Kingfisher/Mabel Lake Floodplain Map

To HWY 1 @ 3 Valley Gap

To Enderby

To Lumby/Vernon

Legend
- Kingfisher/Mabel Lake Boundary
- Flood Risk Area
- Primary Evacuation Route
- Secondary Evacuation Route
- Conditional (4x4 access)

0   2   4 km

Map produced by Frontline Operations Group. January 9, 2020.

The community itself does not hold much risk of overland flooding or debris slides but several areas along the transport corridor, Enderby Mabel Lake, sit within the provincial floodplain and hold substantial risk of debris slide. A flood and/or debris slide event along the road could obstruct access/egress to the community and require the RDNO to facilitate a shelter-in-place or a challenging evacuation using alternative routes, depending on when ground access could be restored.

During the early summer of 1990, the Fall Creek area on the north side of the Shuswap River - which sits above Enderby Mabel Lake Road just 15km east of Enderby - experienced

approximately 66 landslides within a 3-day period. These events impacted forested slopes, forestry roads, BC Hydro transmission towers, homes, and cut-off highway access along Enderby Mabel Lake Road, requiring the evacuation of residents. Heavy logging in the area and drainage diversions were found to be the primary contributing factors to this devastating event. In fact, most landslides in the southern interior of British Columbia can be attributed to drainage diversions and concentration of surface and near-surface water flows.

In May 2014, the area was again impacted by a debris slide near Cooke Creek that washed out a large section of Enderby Mabel Lake Road, including the bridge just east of Cooke Creek. Although it has not been confirmed, investigators believe that the slide was initiated by human tampering to culverts that caused Dale Lake to breach, sending a torrent of debris down Cooke Creek. Others believe it was likely caused by a build up of ice and debris from a beaver dam. The event left approximately 700 residences without electricity and left residents east of the slide with no ground access out of the community.

With the increased occurrence of extreme wildfire behaviour, hotter summers and earlier springs – causing rapid snowmelt events – the area is likely to continue to see debris slides. It will be imperative to ensure that the RDNO is prepared to manage the safety of residents and visitors to the area, in the event that a debris slide occurs and impacts the transport corridor.

Community Profile and Evacuation Design

Understanding the demographics of the community was a significant part of the planning process. It allowed us to ensure that the Evacuation Route Plan would accurately represent the number of people and vehicles needing to evacuate. Information was compiled in the form of a demographic profile, which was then used to establish evacuation design and scenarios for modelling purposes.

Key questions that guided the design of the demographic profile:
- What is the maximum number of people, who we may need to evacuate?
- What is the maximum number of vehicles that will need to be on the highway during evacuation?
- What is the potential demand for transit services (i.e. how many people do not have their own transportation)?
- Where will people go once evacuated?
- How many people may require assistance to evacuate?
- How many people will require shelter and ESS services?
- How many people travel through the community everyday?
- Road capacity

The demographic profile for the Kingfisher/Mabel Lake community was used to:
- Develop evacuation design scenarios to guide the evacuation planning process
- Estimate the potential travel demand
- Estimate the transit resource and shelter requirements
- Determine clearance times for a mass evacuation scenario

Frontline Operations Group reviewed many data sources to retrieve this information:
- 2016 Census data
- RDNO Community Wildfire Protection Plan (CWPP)
- Area F Emergency Response Plan
- Kingfisher Official Community Plan (OCP)
- Interviews with municipal staff and participating agencies
- MoTI Traffic Analysis
- ICBC insurance information
- BC Housing assessment data

Population Demographics

The Kingfisher/Mabel Lake community is located within the RDNO's Electoral Area "F", along with Grinrod, Grandview Bench, Ashton Creek and Mara Lake. The community is located on the western shore of Mabel Lake and is popular among seasonal and recreational visitors throughout the summer months. The Kingfisher/Mabel Lake community is made up of fulltime, seasonal and recreational residences, surrounded by agricultural land. According to Canada Statistics Census (2016), the community has a permanent population of 205, with 41.46% of those residents being over the age of 65. Low numbers of school aged community members caused the closure of the local school in 2000 however, the school continues to be used by community members for several local functions. The community is accessible via Enderby Mabel Lake Rd. from the City of Enderby. An alternate route, via active logging road, can be taken from Ashton Creek (25km west) through Trinity Valley to Lumby.

Summer is high season in the Kingfisher/Mabel Lake area with a dramatic influx of residents and visitors. Part of the influx is due to the Mabel Lake Resort, open May to October, and Mackenzie Camp, which hosts multiple youth and family camps throughout July and August. The area also hosts several commercialized ventures including the Mabel Lake Resort, Marina, RV park and Campground, as well as an airstrip for local air traffic. Notably, the community's population can increase by 2000-5000 on any given day during the summer months. Mackenzie Camp hosts anywhere from 45-70 youth, depending on the camp session and has approximately 14 staff members. Residents of the Kingfisher/Mabel Lake community rely heavily on private vehicles for transportation as there are no public transit options and no local taxi service. Approximately 50 residents commute outside of the community daily which is unlikely to create traffic congestion along the Enderby Mabel Lake Rd.

Road capacity

The RDNO commissioned traffic counts for Enderby Mabel Lake Road during the summer and early fall of 2009 in advance of the local area plan process. While the exercise indicated a definite increase in traffic during the summer period (July 28 through August 12) compared to the fall period (September 9 through September 24), the traffic volumes are well within the parameters for a two-lane rural highway (using TAC guidelines). At the maximum peak hour under ideal conditions, only 21% of maximum capacity was achieved. The general conclusion is therefore that traffic volume is unlikely to pose a technical constraint.

The Ministry of Transportation and Infrastructure Regional Study did not extend to Enderby Mabel Lake Road, meaning that there is no public traffic data available for the area. Despite this, some educated assumptions on daily road use can be made. Utilizing the US army corps (USAC) road lane capacity tool, the 50km speed limit and a contingency amount (during an evacuation) we derive the highway capacity is approximately 700 vehicles per hour. This figure includes an allowance for emergency access vehicles and road obstructions. Other traffic models produce road lane capacity at 1000 vehicles per hour at 40 km/hour or even higher. For the resort community, due to the number of constrictions including bridges and pinch points, as well as the capacity of the road, the USAC calculations have been deemed appropriate.

If a mass evacuation of residents took place of 5,000 residents, assuming no lead in time for preparation, it would take a maximum of 7 hours to clear all residents from a state of readiness. With an approximate lead in time for decision making, we can include an additional minimum two hours which would result in the area being cleared within 9 hours. A tactical evacuation due to an impending threat would be implemented by the RCMP and would therefor be an expedited process. These estimations do not include the lead in time for evacuation of a vulnerable population where preparation takes place during the Alert stage. Travel time to destination must also be considered. In the case of the Kingfisher/Mabel Lake community, the first community that evacuees would reach travelling along Enderby Mabel Lake Road is Enderby - a travel time of 30 minutes. It is important to consider Enderby's capacity for hosting evacuees as their resources may be quickly exceeded, requiring a further 30 minutes of travel to Vernon.

Evacuation Design Scenarios

The evacuation design scenarios for the community were built using the maximum estimated population that can be expected during the year, which would be a peak summer weekend day. This includes permanent residents, seasonal residents, vulnerable populations, and visitors. The highest estimated population was used to develop the Plan in order to accommodate for the worst-case scenario. Evacuation clearance times outside of peak days are not expected to be considerably different from a planning perspective due to the relative stability of the seasonal residential population base and tourism numbers, as well as high vehicle ownership within the community.

If an evacuation occurred on a weekday during working hours, we can assume that evacuee numbers would not change significantly. This is due to the fact that worst-case scenarios are developed using peak summer population, and seasonal residents and visitors would likely not be commuting to work or leaving the community regularly. It was decided that there are too many variables to accurately model this assumption.

Design Scenario	Total # of evacuees	Number of vehicles[2]	Require transportation[3]	Predicted destination	Require group lodging	Require evacuation assistance
Peak summer weekend day	5,000	4,500	200	Enderby Lumby Vernon (dependant on location of hazard)	150	100
Peak summer weekday during business hours	3,500	3,150	250		200	100

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[2] Due to the rural location of the community, it is assumed that 90% of residents will have access to a vehicle

[3] It is assumed that during summer weekdays the population figure that requires transportation is comparatively higher than that of a weekend based on numbers of single vehicle families – considerations must also be made for evacuation across the lake

Assumptions

General Assumptions about emergency planning include:

- Emergency management is a dynamic process. This means that the current plan is a snapshot of preparedness activities and actual events may require a change in what has been written in the plan. The Evacuation Route Plan should be regularly tested, reviewed and adapted to reflect lessons learned from tests and actual experiences.
- Emergency response requires room for flexibility and improvisation. The nature of emergencies and disasters is such that not all aspects of a response can be planned for. The structures and systems described in the Evacuation Route Plan should therefore be seen as guidelines that can be adjusted and adapted by those responsible for evacuation.

Specific Assumptions about Evacuation Planning are:

- **Shelter-in-Place**
  - Spontaneous Evacuation may occur despite warnings to shelter-in place rather than evacuate
- **Evacuation**
  - Spontaneous evacuation will occur when there is enough warning of the threat. Between 5 and 20 percent of the people at risk will self evacuate before being directed to do so.
  - Some people will refuse to evacuate, regardless of the threat
  - Some individuals will require transportation support to evacuate
  - Some owners of animals will refuse to evacuate unless arrangements have been made to care for their animals
  - Many evacuees will seek shelter with relatives, friends or motels rather than use government-provided facilities
  - For some hazards, such as flooding and tsunami, designated evacuation routes must be used to safely evacuate people.
  - The day of the week and time of day will determine if individuals/families will be at their homes or separated at work/school
  - Many hazards provide a warning period which allows for a planned evacuation and re-entry
  - Approximately 10-20 percent of the population impacted will require some form of assistance from local ESS teams in Receptions Centres or Groups lodging facilities. This figure could vary depending on the compositions of the community.

Concept of Operations

Framework and Principles

In order to safely and efficiently evacuate the residents of Kingfisher/Mabel Lake, it is essential to establish a shared comprehensive framework that clarifies organizational structure, roles and responsibilities of stakeholders, and coordination processes. The Concept of Operations (CONOPS) for evacuation is based on the BC Emergency Management System (BCEMS) which was developed under the BC Emergency Program Act to standardize practice for all municipal and provincial governments and is the recommended *best practice* for all stakeholders in BC.

This CONOPS aims to aid evacuation planners in the RDNO in planning and coordinating all evacuation operations with multiple stakeholders at various levels and jurisdictions. This section provides an overview of the common framework and guiding principles that will be used during a mass evacuation scenario for the Kingfisher/Mabel Lake community, including BCEMS, Incident Command System (ICS), Unified Command (UC), inter-agency communications and standard operating procedures.

An overview of the coordination and management of an evacuation is also provided. The specific roles and responsibilities of each agency involved in evacuation are covered in the Roles and Responsibilities of Agencies section.

BC Emergency Management System (BCEMS)

BCEMS is a comprehensive framework that helps ensure a coordinated and organized approach to emergency and disaster response. Developed under the authority set out in the BC Emergency Program Act and the Emergency Program Management Regulation, BCEMS is standard practice for all provincial government ministries and Crown corporations as indicated in the Regulation. It is an emergency management system founded on the principles o the Incident Command System and includes common language, span of control, and management by objective and scalability. BCEMS is the recommended 'best practice' for all emergency management stakeholders in BC and applies to emergencies, disasters and catastrophic events. It operates under four operational levels: Site level, site support, provincial regional coordination, and provincial central coordination.

Incident Command System (ICS)

ICS is a standardized on-scene incident management concept designed specifically to allow responders to adopt an integrated organizational structure equal to the complexity and demands of any single incident or multiple incidents without being hindered by jurisdictional boundaries.

An ICS enables integrated communication and planning by establishing a manageable span of control. An ICS divides an emergency response into five manageable functions essential for emergency response operations: Command, Operations, Planning, Logistics, and Finance and Administration.

Unified Command

Although a single Incident Commander normally handles the command function, an ICS organization may be expanded into a Unified Command (UC). The UC is a structure that brings together the "Incident Commanders" of all major organizations involved in the incident in order to coordinate an effective response while at the same time carrying out their own jurisdictional responsibilities. The UC links the organizations responding to the incident and provides a forum for these entities to make consensus decisions. Under the UC, the various jurisdictions and/or agencies and non-government responders may blend together throughout the operation to create an integrated response team.

The UC is responsible for overall management of the incident. The UC directs incident activities, including development and implementation of overall objectives and strategies, and approves ordering and releasing of resources. Members of the UC work together to develop a common set of incident objectives and strategies, share information, maximize the use of available resources, and enhance the efficiency of the individual response organizations.

Coordination and Management of Evacuation

Site Level

Incident Commander/Unified Command

- The Incident Commander provides information and recommendations to the EOC for when an Evacuation Alert, Order or Rescind needs to be issued
- If the emergency situation shows an immediate threat to the health and safety of people, the Incident Commander can initiate a Tactical Evacuation
- Confers with the EOC (if activated) to determine area to be evacuated, proposed evacuation routes, Assembly Points, etc.
- Provides regular situational awareness to the EOC and EMBC on variety of topics
- Agencies, organizations, and partners at the site level should have representatives in the EOC in order to provide information and coordinate communications

First Responders

First Responders work at the site level of an event and include police, fire and ambulance. Activities of first responders include medical response, firefighting and managing crowds or evacuation zones. When a local authority EOC is activated, police and fire first responder agencies provide situational awareness to the local authority and submit requests for support to the local authority EOC. The BC Ambulance Service provides situational awareness and coordinates resources through the PREOCs and PECC.

Site Support

Emergency Operations Centre

- Activates the evacuation plan

- Supports the Site Level operations with resources and information, as required
- Initiates/authorizes early evacuation for vulnerable people and livestock
- Manages all aspects of the evacuation cycle including providing support to evacuees through ESS
- Ensures evacuees have essential supplies such as food, water, beds, sanitation services, clothing, and medical equipment and supplies
- Prepares for and coordinates Evacuation Alerts, Orders and Rescinds including the mapping of the evacuation area, and the identification of evacuation routes and reception centre locations
- Identifies and notifies potential host communities, maintains communication between identified host communities through the full evacuation cycle
- Tracks and records information on evacuation details, such as areas and numbers of impacted individual
- Provides concise, consistent, transparent, and accurate information to the public and the media
- Ensures elected officials have been alerted and kept informed
- Tracks costs and resources

Emergency Support Services (ESS)

- Works with EOC to determine locations of Reception Centres and Group Lodging
- Establishes and manages Reception Centres and Group Lodging facilities, under direction from the EOC
- Communicates resource needs to EOC
- Provides regular situational awareness to the EOC and EMBC on variety of topics, such as number of registrants, approximate value of referral distributed, additional supports required, and current status of operations

Provincial Regional Coordination

EMBC has its headquarters in Victoria and incorporates six regional offices. During an emergency, one or more of the PREOCs will activate as required, in support of local authorities and provincial ministries. PREOCs are responsible for the provision and coordination of provincial support or local authorities and First Nations within designated regional boundaries.

The PREOC for the RDNO – Kingfisher/Mabel Lake – is covered by Central PREOC, located in Kamloops.

Local Authority

Local authorities include municipalities and regional districts. Local authorities hold primary responsibility for emergency planning, response and recovery within their jurisdictions. Under Section 6(2) and 6(3) of the Emergency Program Act (EPA), the local authority must develop emergency plans for response and recovery as well as establish an emergency management organization to develop and implement emergency plans and other preparedness, response and recovery measures.

During an emergency or disaster, the local authority will activate its emergency operation centre (EOC). In larger events, neighbouring local authorities may choose to run a joint EOC. Through the EOC, the local authority performs the following tasks:

- Assess the situation
- Provides support to the first responders, including resources
- Provides public information, including media briefings
- Coordinates the provision of food, clothing, shelter, and transportation
- Liaises with volunteer groups
- Provides situation reports to the PREOC
- Tracks finances
- Coordinates recovery of essential services
- Coordinates community recovery efforts
- Authorizes States of Local Emergency, Evacuation Alerts, Orders, and Rescinds
- Provides policy direction and establishes priorities during all phases of an evacuation, base on recommendations by the EOC Director or Chief Administrative Officer (CAO)

Provincial Central Coordination

Emergency Coordination Centre (ECC)

The Emergency Coordination Centre (ECC) is a 24-hour centre that records, reports and monitors emergency incidents across the province 365 days per year. If an emergency incident occurs with potential to escalate or has required the activation of the local emergency operations centre(s), the ECC will contact designated EMBC regional and headquarters staff. EMBC staff will activate the PREOC and/or PECC if deemed necessary. The ECC facilitates the flow of information within and between agencies and senior officials if local telecommunications are impacted.

Provincial Emergency Coordination Centre (PECC)

The PECC is the central EOC responsible for the overall coordination of the integrated provincial response and implementation of the provincial priorities. The PECC is located in Victoria.

During activation, the activities of the PECC include:
- Supporting PREOCs;
- Coordinating provincial response and recovery activities;
- Assigning provincial critical resources;
- Providing provincial messaging;
- Creating and distributing provincial situation reports;
- Liaising with the federal government;
- Ensuring provincial senior officials are apprised of provincial response activities; and
- Implementing policy directives received from the Central Coordination Group (CCG)

During large emergency responses the Central Coordination Group (CCG) is activated to ensure cross-government and multi-agency coordination of response activities. The primary function of the CCG is to provide strategic direction as well as oversight of provincial integrated emergency response and recovery activities to the PECC. Participation is hazard-based and includes senior representatives from ministries/agencies with responsibilities associated with the event.

Organizational structure of the CCG is determined by the hazard type and the identified consequences or potential consequences of an emergency or disaster. It is generally co-chaired by EMBC and a senior representative (Executive Director or ADM level) from the ministry with primary responsibility for the event hazard.

Interagency Communications

The Regional District of North Okanagan is responsible for developing, implementing and maintaining the emergency program for the Kingfisher/Mabel Lake area and all other unincorporated communities within the RDNO. In the event of an emergency or disaster, the RDNO will open their EOC on behalf of the community and manage the event.

Roles and Responsibilities of Agencies

Executing a mass evacuation that could require sheltering in a neighbouring community requires many agencies and clarity on the role of each. This section outlines the general roles and responsibilities of local, provincial, federal, private and not-for-profit agencies during a mass evacuation of the Kingfisher/Mabel Lake community.

When preparing for, or executing an evacuation, there are roles and responsibilities common to all agencies which include:
- Participate in evacuation planning and exercises
- Activate agency EOC when notified of mass evacuation
- Provide a representative to the local government EOC. If this is not possible, provide a 24/7 direct point of contact.
- Provide situational updates to the local government EOC

Local Government Agencies

Regional District of North Okanagan (RDNO)

- Lead all aspects of emergency preparedness, response, and management for unincorporated communities within the RDNO
- Provide IC as appropriate
- Provide cascade or dissemination of evac orders (door-to-door, Local emergency comms system) as appropriate

- Support evacuees with Emergency Social Services (ESS)
- Assist in coordination and liaison with neighbouring local governments and provincial agencies.
- Monitor events and issue warnings
- Activate EOC to facilitate centralized decision-making, acquire and coordinate resources (vehicles, personnel, equipment)
- Primary communication and coordination link between agencies and organizations involved in the evacuation
- Provide data and information to response and support agencies
- Issue alerts, orders and rescinds on behalf of the community with pre-consultation to the community
- Assist individuals that cannot evacuate themselves
- Provide updated public information
- Oversee and monitor the evacuation process
- Coordinate damage assessments to facilitate the re-entry process

Splatsin Indian Band (SIB)

- Liaison in EOC
- Subject matter expert on sensitive or culturally significant land
- Assist with evacuation planning and implementation when it affects reserve land

RCMP

Operating on behalf of the local authority, as requested:

- Door-to-door notification of Evacuation Orders
- Request capacity support from Ground Search and Rescue (GSAR) for community Evacuation Orders
- Provide personnel for security checkpoints of evacuated area
- Facilitate temporary access as directed by local authority and/or responding agency
- Support repatriation upon Evacuation Rescind
- Provide personnel for traffic control points

Provincial Government Agencies

Emergency Management BC (EMBC)

- Through activation of the Provincial Regional Emergency Operations Centre (PREOC), or Provincial Emergency Coordination Centre (PECC), or the Regional Duty Manager, as required
- Coordinates any national and international supports required for impacted communities
- Hosts daily coordination calls for Local Authorities, First Nations, and all responding agencies
- Provides connection and coordination between all responding parties

- Reviews and provides feedback on evacuation plans for the impacted community
- Assist with evacuation route planning and re-entry planning, upon request
- Assist in executing evacuations by way of resource requests or expenditure authorization for critical resources (e.g. transportation services, security, physical blockades, Search and Rescue)
- Assist with communications to evacuees and the general public
- Accesses provincial volunteer resources (Search and Rescue, ESS Mobile Support Team, Provincial Emergency Radio Communications Service, PEP Air, Road Rescue) as required

Interior Health
(No local services)

- Check water quality prior to re-entry
- Execute evacuation plan for Interior Health run assisted-living
- Coordinate with EOC for transportation and resource requirements

Ministry of Agriculture (AGRI)

- Provides advice to farmers, aqua-culturists and fisheries on the protection of crops, livestock, and provincially managed fish and marine plant stocks
- Coordinates the emergency evacuation and care of poultry and livestock
- Provides support to lead agencies, Local Authorities, First Nations, and agriculture producers, including with the planning and execution of livestock evacuation, emergency feeding, sheltering and care
- Provides support to EOC/CCs, PREOCs, and the PECC with assessing temporary access requests by individual agriculture producers
- During an animal health emergency, establishes quarantine or control zones that may prohibit, limit, or impose requirements in respect to the movement of persons into, from, or within the area
- During a plant or animal disease incident, or pest outbreak, serves as the Provincial lead agency for response, coordinating with the Canadian Food Inspection Agency as required

BC Wildfire Service (BCWS)

For wildfire hazard events:
- Leads the response of all operations to wildfire hazard
- Provides recommendations to First Nations and Local Authorities on Evacuation Alerts, Orders, and Rescinds
- Assists with delineation and mapping for boundaries of recommended Evacuation Alerts and Orders
- Provides recommendation on safety of temporary access
- Provides public information regarding Evacuations, in support of and in close conjunction with EOC/CC
- Maintains consistent and effective communication platforms and structures with EOC/CC and RCMP

- Provides technical expertise where requested for flood hazard event, as requested by PECC and/or PREOCs
- Provides resources, communications and logistical support

Ministry of Children and Family Development (MCFD)

As required, through support and coordination with the Emergency Management Unit, MCFD:
- Liaises with EMBC through regional and Provincial coordination calls
- Provides support to Service Delivery Areas and Local Service Delivery offices in the continuity of services
- Provides direct assistance to caregivers and contracted care providers in impacted areas
- Maintains a mechanism for the tracking of displaced children and youth in care
- Receives, assesses, and responds to reports of unattended children •
- Upon request, liaises with communities to assess need for local MCFD representation during major evacuations

Ministry of Environment (ENV)

- Monitors, augments, or takes over the response to hazmat incidents related to evacuations
- Provides technical advice to EOC/CCs, PREOCS, or the PECC, First Nations or Local Authority fire departments, public works, or other agencies or parties to support a timely effective response to hazmat incidents or consequences related to evacuation
- In regard to hazardous spills, identify and evaluate the immediate risks to and impact on the environment, human health or infrastructure and as necessary advise agencies or parties to take protective action in relation to the spill, which would include evacuations
- Declares a State of Environmental Emergency when required
- Orders response or recovery actions to protect the environment and human health

Forests, Lands, Natural Resource Operations and Rural Land Development (FLNRORD)

In response to flood hazards, and through the PREOCs and/or PECC:
- Through River Forecast Centre (RFC), issues advisories and provides forecast updates to First Nations and Local Authorities
- Communicates with First Nations and Local Authorities and Diking Authorities on flood mitigation works
- Provides technical advice and specialist expertise, support services, and staff for PECC/PREOCs

Health Emergency Management BC (HEMBC)

- Provides leadership and support to health sector
- Responsible for providing health services and care to existing patients and clients
- Evaluates the risk to affected communities and moves patients to health care facilities in other communities, as appropriate, usually during the Evacuation Alert stage

- Tracks outpatients during evacuations (those receiving home care, outpatient treatments, etc.) and makes certain outpatients are continuing to receive specialized care in host communities
- Provides psychosocial support to evacuees through the Disaster Psychosocial Services (DPS) program
- Prior to an Evacuation Rescind being issued by the EOC/CC, health authorities work to re-establish key health services
- During re-entry, health authorities utilize appropriate health programs to provide public health advice and guidance (e.g. how to address houses contaminated by moulds or freezers filled with rotten food)

Ministry of Transportation and Infrastructure (MoTI)

In respect to provincial highways:
- Works closely with First Nations and Local Authorities, and the RCMP during the pre-planning of an evacuation with regards to the selection, capacity, and conditions of proposed evacuation routes, and ensuring that all detours are viable for all types of traffic
- Provides assistance strategizing on proposed messaging to the public through DriveBC about alternate routes once an Evacuation Order is in effect
- Assists RCMP with traffic control and posts signage at key decision points along the evacuation route
- Local Maintenance Contractors conduct roving patrols, assisting evacuees with breakdowns along the route or fuel shortages etc.
- Responsible for staffing all checkpoints on provincial highways
- Prior to Evacuation Rescind, works closely with EOC/CC to establish timing of repatriation, and ensuring transportation infrastructure is in a condition to support evacuees returning home

Federal Government Agencies

Canadian Armed Forces (CAF)

Through written request by the Province in the form of a Request for Federal Assistance (RFA):
- May provide extraction services to trapped evacuees
- May deliver emergency resources to difficult-to-reach areas
- May provide any needed support as authorized by RFA Coordinated by the Joint Rescue Coordination Centre in Victoria, leads all Marine or Aircraft Search and Rescue

Indigenous Services Canada (ISC)

- ISC enters into service agreements with the Provinces, Territories or other response agencies, who in turn support evacuation from reserves during emergencies. ISC reimburses evacuation costs and supports First Nations and partners to resolve jurisdictional questions and other issues as they arise. Additionally, under ISC's Build Back Better Strategy Guide, the Department can contribute funding for additional social and cultural supports such as traditional foods and cultural continuity services.

Innovation, Science, and Economic Development Canada (ISED)

- Acts as the federal coordinator for telecommunication stakeholders whose infrastructure may be impacted
- Works closely with telecommunication carriers to support their efforts to mitigate or restore impacted services
- Acts as federal representation of the telecom stakeholders' interests in efforts such as temporary access, fuel prioritization, power re-energization, credentialing, public communications, international assistance, and the movement of resources
- Manages the information flow to and from telecom stakeholders and other federal government departments, particularly Public Safety Canada

Public Safety Canada (PSC)

- Coordinates Provincial Request for Federal Assistance (RFA) and works with federal family to provide support on behalf of the Government of Canada

Private Entities and Non- Profit Agencies

Canadian Red Cross (CRC)

Upon invitation from a Local Authority of First nation, and with approval from EMBC funding:
- Provides capacity support to local ESS team
- In the absence of local ESS, manages the ESS framework for evacuees

Ground Search and Rescue (GSAR)

Upon request by the RCMP or the EOC/CC:
- Provides support to RCMP for community notifications of Evacuation Alerts/Orders
- Provides short-term temporary checkpoint support until appropriate contracted resources arrive

Canadian Disaster Animal Response Team (CDART)

Upon request from local authorities:

- Setup of temporary animal relief shelters
- Evacuation of animals
- Rescue of abandoned or stranded animals
- Implementation of a record keeping and identification system
- Transportation of animals
- Coordination of veterinary care for sick or injured animals
- Coordination of animal food and supplies
- Compassionate removal of animals who don't survive the disaster
- Lost animal documentation
- Reuniting animals with caregivers

- Facilitating fostering and/or adoption of unclaimed or surrendered animals
- Maintenance of animals sheltered in place

Oil and Gas Commission (OGC)

- Monitors oil and gas activities in immediate area and prescribed zone around area
- Contacts permit holders with assets within and surrounding evacuation area to ensure they are aware of the situation and taking precautions, if necessary, and enable ongoing communication between responding parties
- Releases safety advisories to permit holders updating them on emergency event conditions

Evacuation Routes, Assembly Areas, and Transportation

There are several strategies, techniques, and tools available to direct and control traffic during an evacuation. Evacuation strategies are implemented to best manage or enhance the capacity of the local road systems, modify routes to keep traffic moving, and manage the evacuation safely. During an evacuation of the community, evacuation strategies will be required to reduce congestion and keep traffic moving. Traffic congestion is well-documented and is known to lengthen evacuation clearance times, contribute to evacuee discomfort and stress, and increase demand for enroute services such as food, water, fuel, emergency response vehicles and tow trucks. This section provides an overview of the different strategies available to the RDNO and Kingfisher/Mabel Lake community.

The specific evacuation scenario at the time of the emergency and the availability of resources, will dictate which strategies are implemented and in what capacity. Not all evacuation strategies will be viable or appropriate in every evacuation scenario. This section should be considered a toolbox for decision makers, meaning that only those strategies required and viable for the specific evacuation scenario will be implemented. Detailed checklists for implementing the specific evacuation strategies and locations where the evacuation strategies may be effective are included in the Operational Evacuation Plan.

Decision to Evacuate

The Evacuation process involves the removal of people, animals and livestock from a dangerous or potentially dangerous area to a safer location.
The Evacuation Route Plan will outline procedures and resources for all activities within the section defined by a red rectangle, including:
- ✓ Prioritizing/Phasing
- ✓ Egress
- ✓ Assembly points
- ✓ Vulnerable populations
- ✓ Animals and Livestock
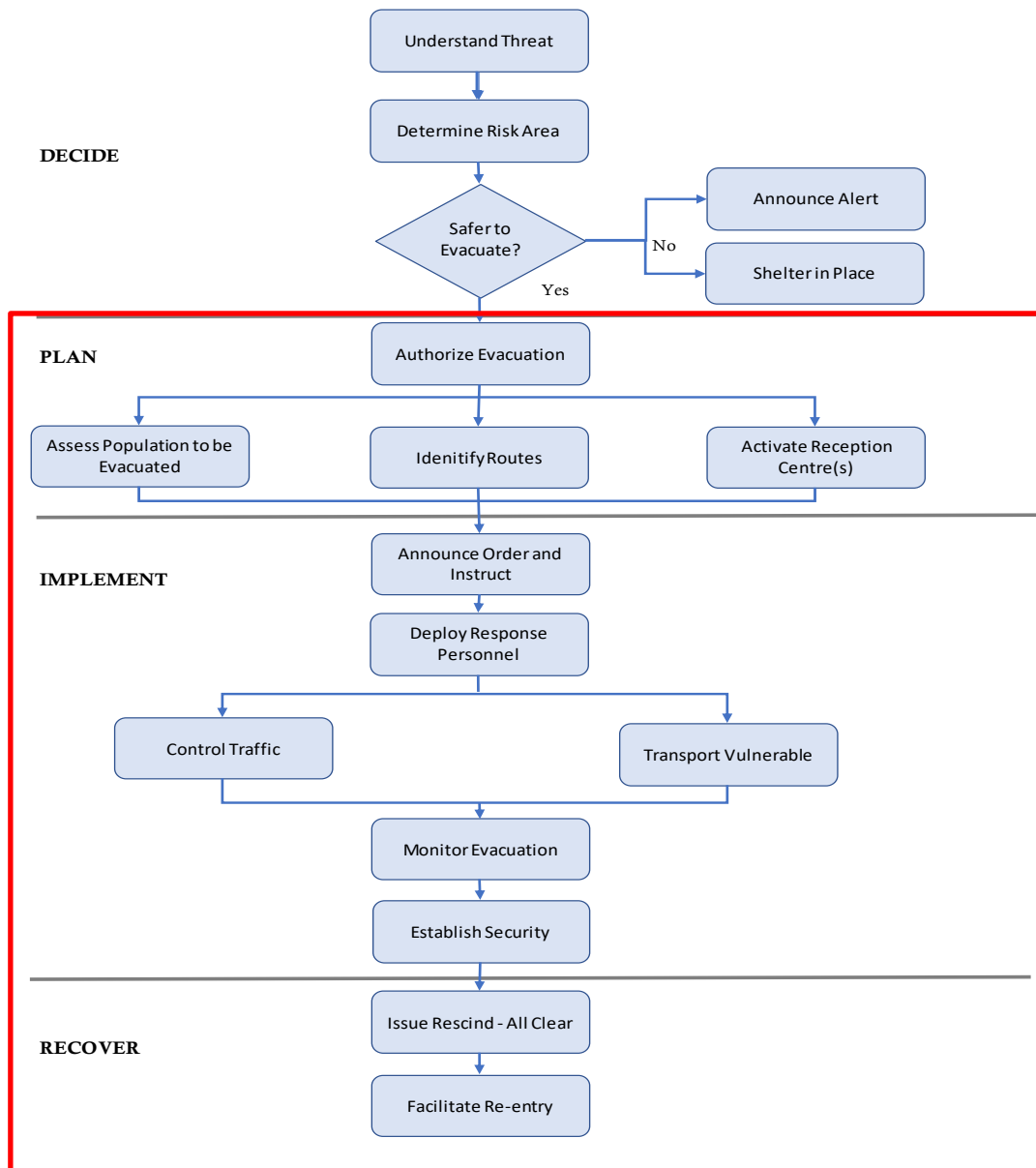
The identification of trigger points and indicators will likely happen on an ad hoc basis, dependant on the type of hazard being dealt with. To facilitate the planning process, an overview of what is involved as well as a formula to facilitate the decision-making process has been provided below.

Ordering residents to evacuate is recognized as one of the most difficult decisions a local authority is likely to make. It should occur when the Director of the Emergency Operations Centre (EOC), in consultation with the Incident Commander, decides that the risk to the community is high or the community can no longer provide the necessities of life (food, water, shelter).

Timing is important; considering that ordering an evacuation too far in advance can expose the evacuees to unnecessary hardship and/or create a complacency for future evacuations. The general formula for determining the time needed to conduct an evacuation is provided below:

FORMULA FOR DETERMINING EVACUATION TIMELINE
Time required to process the paperwork (drafting and sign-off) +
Time required to mobilize notification personnel +
Time required to notify impacted population +
Time required to physically conduct the evacuation +
120 minutes contingency =
Trigger point for evacuation

A detailed process and timeline for evacuation procedures for the Kingfisher/Mabel Lake community can be found in the Operational Guide.

Evacuation Zones

As part of evacuation planning, the RDNO – Kingfisher and Mabel Lake has identified evacuation zones. The purpose of multiple evacuation zones delineates the population by area for the purpose of location-specific evacuation planning and response. During the evacuation planning phase, evacuation zones allow officials to evaluate the hazards, demographics, emergency traffic demand and egress routes of specific areas. During evacuation response, evacuation zones allow officials to issue evacuation alerts and orders to specific areas and to provide tailored information and instructions by location. Evacuation zones allow officials to provide residents and visitors with clarity on what actions they need to take based on their location and proximity to the hazard. It's critical that residents and employees know which evacuation zone they live and work in.

The RDNO had previously divided the regional district into evacuation zones (figure 5) and those zones have been recognized throughout this Plan. For the purpose of this Plan we divided the focus area into three zones that correspond to portions of the previously identified zones including F80, F81, F82, F83, F84, F88. The previously identified zones are still relevant and should be used in conjunction with the new zones when responding to emergency events in the Kingfisher/Mabel Lake area.
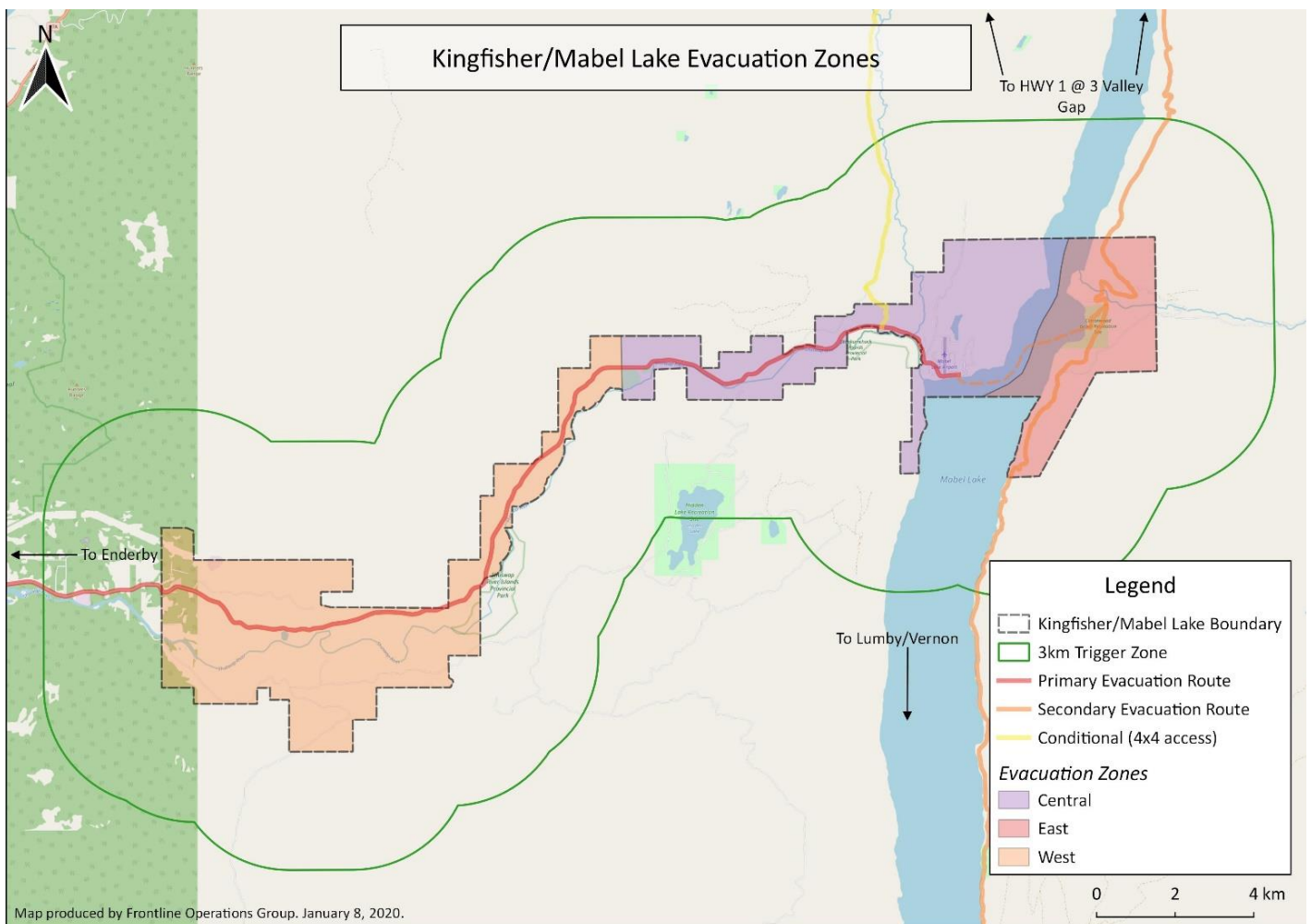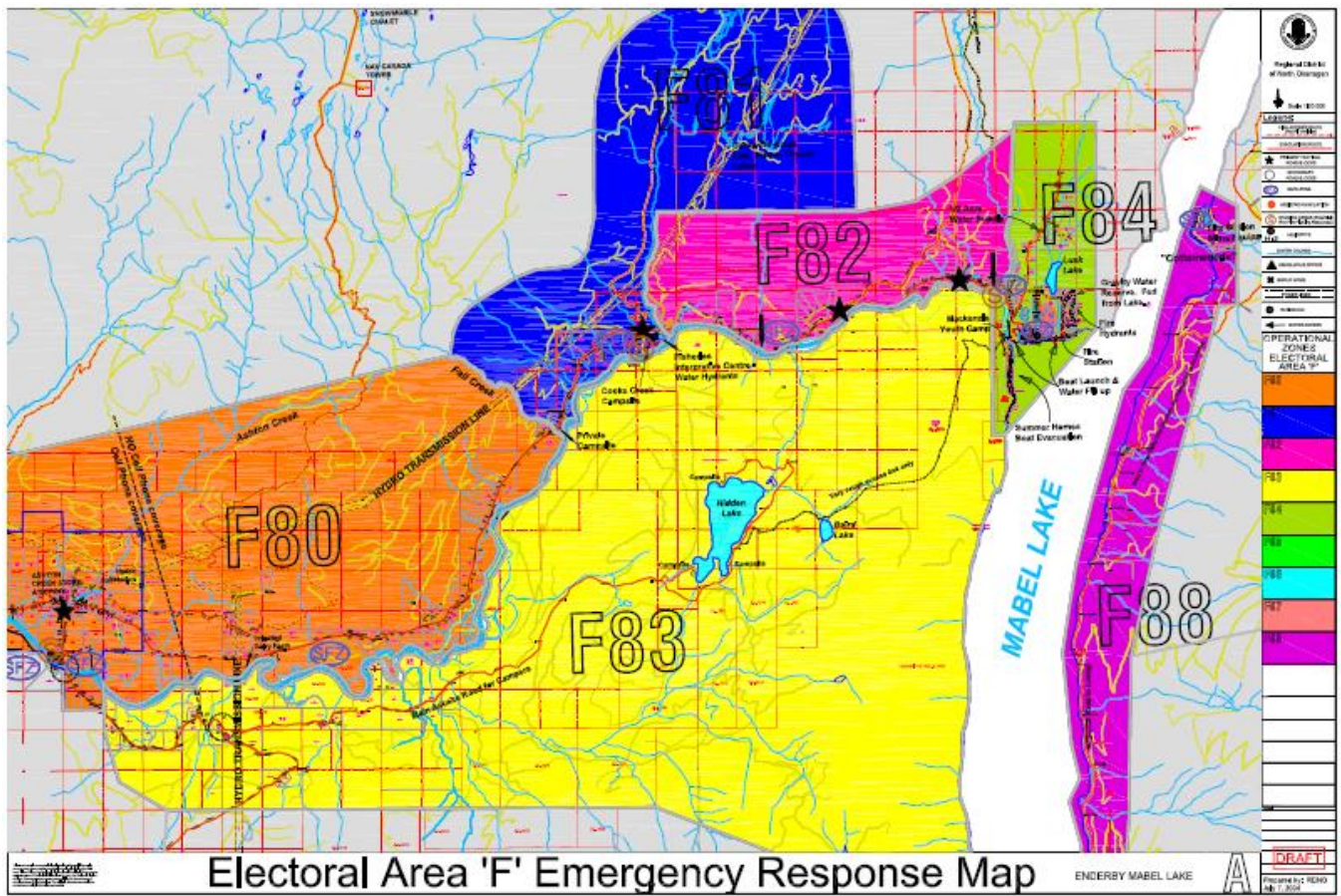
Figure 5 – Emergency response zones previously established in the Electoral Area F Emergency Response Plan

Evacuation Phasing

Evacuation phasing involves scheduling the departure times of evacuees by evacuation zone, so that people are evacuated in stages, rather than all at once to reduce congestion on roadways. Although the goal of an evacuation is to move people away from the threat as quickly as possible, a single concentrated travel departure pattern can inhibit overall traffic movement, particularly where there are critical constraints, such as intersections and merging lanes. In addition, because evacuations usually involve movement in a single direction away from the hazard, evacuees closest to the hazard can sometimes experience the longest travel times.

Although a phased evacuation may take longer overall to execute, it will provide a more efficient systematic evacuation through better traffic control, lower highway volumes and will decrease the likelihood of backups and driver travel times. Whenever possible, a phased evacuation is preferable. Public communication will be critical to promote trust and adherence as compliance with a phased approach may be challenging if people perceive a serious threat.

There are different strategies to implement phased evacuations, and the specific evacuation scenario at the time of the emergency will dictate if, and in what capacity, a phased evacuation is implemented. These strategies include:
1. Issuing sequential evacuation orders that begin evacuations in areas closest to the hazard first, and then working away from the hazard. This ensures that people most at risk are moved out of the hazard area first.
2. Issuing evacuation orders to evacuation zones closest to the outbound end of the community first and working backwards across the community. This strategy moves the outbound neighborhoods out of the way, so inbound traffic can move through.
3. Evacuating the neighborhoods with the densest population areas first, as this will take the longest.
4. Asking non-resident populations to leave during the evacuation alert stage to reduce the number of people that need to evacuate once the need for evacuation is confirmed and an evacuation order is issued.
5. Allowing people, who will take more time to evacuate (e.g. people with disabilities or medical health issues), to leave first to ensure they have the time they need to evacuate safely.

Note: Because it is impossible to enforce phased evacuations, these are a guidance-only strategy and will need to be included in public education prior to an evacuation, and once an evacuation is possible or confirmed. Public information is important to avoid shadow evacuees: people outside a declared evacuation zone, who evacuate unnecessarily or at the incorrect time. Shadow evacuees congest roadways and inhibit the egress of those evacuating from an area at risk.

Destination Assignment

Another strategy to modify demand in an evacuation is to assign evacuees to specific destinations. Destination assignment involves assigning evacuees to specific routes and destinations to decrease congestion on main evacuation routes. This strategy involves asking or directing evacuees, or in a worst-case scenario implementing roadblocks to compel compliance to a specific route or destination. In the Kingfisher/Mabel Lake community there is only one primary access and egress route for the community – Enderby Mabel Lake Road. Therefore, this would involve asking or directing people that have appropriately vehicles to evacuate to the north which may reduce congestion depending on time of year and population numbers.

While destination assignment is an option, it is preferred that people are able to select their own route and destination, as they are more likely to have support at their preferred destination. If circumstances justify destination assignment, it is preferred that it be voluntary. Making destination assignment mandatory by way of a roadblock should be a last-resort option, as it can force people to unfamiliar areas where they lack support, and separate families and friends. Only in the most immediately life-threatening situations should people be evacuated without being able to gather their family, friends and pets.

Assembly Points

Designated Assembly Points serve as locations where those individuals without transportation will congregate in order to be transported to an Evacuation Point or designated Reception Centre. Assembly Points should be a large area and well-known to the general public. Areas such as shopping, and community centers serve as appropriate spots for such Assembly Points.

Appropriate signage will be required leading up to each of the Assembly Points to assist those arriving on foot. The coordination of buses for transportation between the Assembly Points and Reception Centers is critical in the success of the evacuation process.

There will be some individuals who may be unable to get to an Assembly Point due to physical limitations. Those individuals must be encouraged to call the Emergency Call Centre (if activated) and advise that they will require assistance. This specific messaging must be included in any press releases by the Information Officer.

Transportation Assistance

People who are unable to travel to the designated assembly points for transportation should develop a personal emergency plan with a family, friend or neighbour that can provide them assistance and/or transportation assistance. If this is not an option, they will be directed to contact the EOC to arrange transportation directly from their residence. The EOC call center will ask a series of questions to determine transportation needs and forward the information to the EOC Operations desk for review and implementation. Details about accessible transit resources is available in the Operational Evacuation Plan.

Requests for Additional Transportation Resources

With its semi-remote location and limited municipal resources, it is highly unlikely that available transportation resources will be sufficient to meet the demand for transportation in a mass evacuation. Transportation resources will be required from outside the region. At the request of local government, EMBC will coordinate and provide additional resources in support of evacuation operations. The local government should submit a resource request for extra transportation resources, ideally as soon as an evacuation is considered and definitely at the evacuation alert stage. This is included in the Operational Evacuation Plan pre-evacuation checklist.
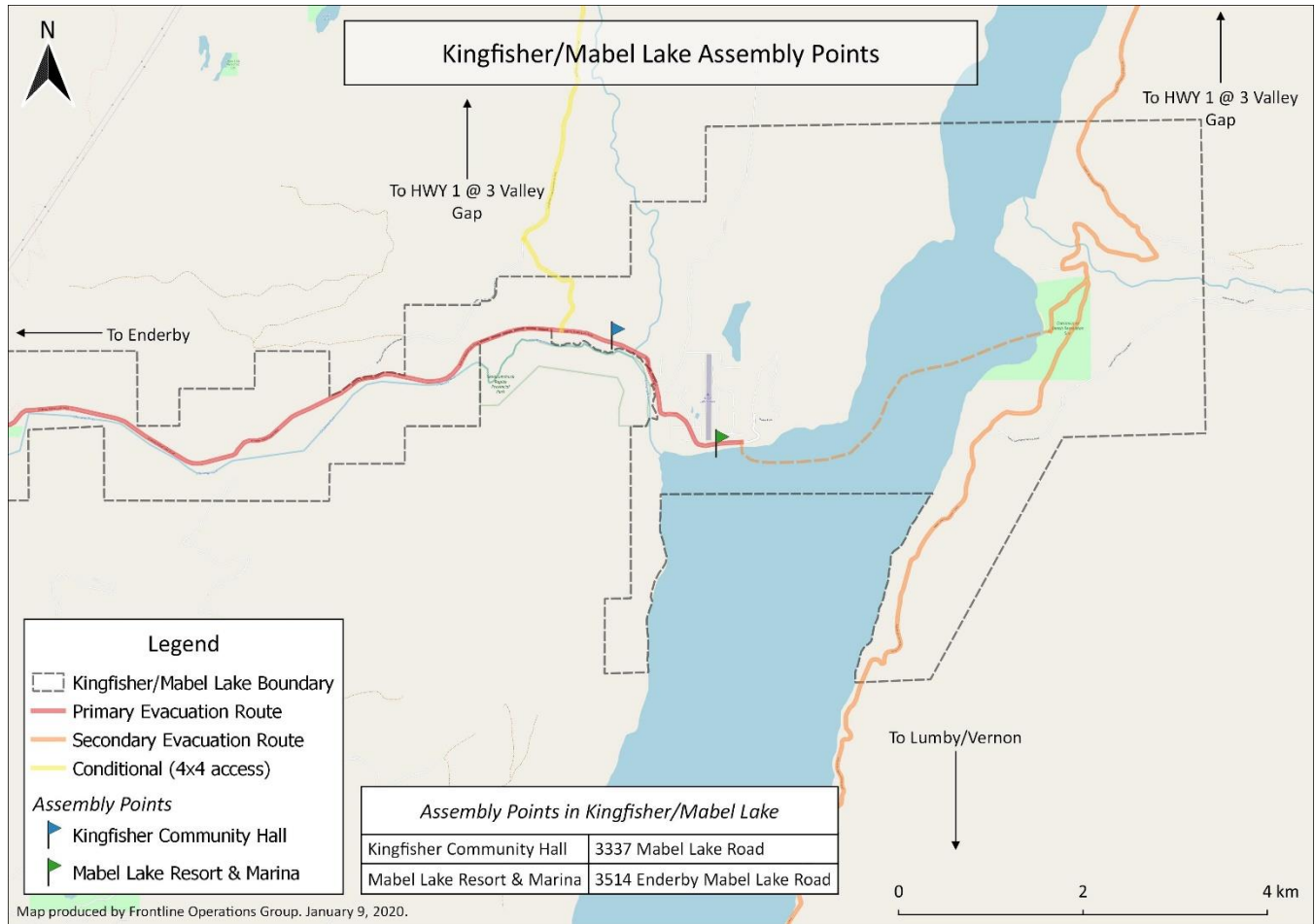
Transportation Options for People with Pets

In addition to people, pets must also be considered during evacuation planning. For the purpose of this plan, household pets are defined as domesticated pets (e.g. dogs, cats, birds, rodents) that are traditionally kept in the home for pleasure, rather than commercial purposes and can travel in commercial carriers and be housed in temporary facilities. In coordination with EMBC, the RDNO will make every attempt to ensure that dedicated transportation resources are available to people with pets in coordination with ESS.

Reception Centers

Reception Centers are safe gathering places for people displaced from their homes as a result of an emergency or disaster. At a Reception Centre, individuals can register and receive Emergency Support Services (ESS) as well as information about the emergency situation including the evacuation. Further information on ESS can be found in the ESS section of this document.

As mentioned at the beginning of this document, following the COVID-19 pandemic, extra precautions and best-practice guidelines will be followed to reduce the likelihood of infectious disease transmission where ESS services are provided.

The services that are provided at a Reception Centre include, but are not limited to:
• Registration
• Referrals for food, clothing, lodging and/or amenities
• Reunification with family or friends
• Emotional support
• Assisting persons with special needs
• First aid
• Multi-cultural services
• Pet care

Kingfisher/Mabel Lake Reception Centres

Legend
- Kingfisher/Mabel Lake Boundary
- Primary Evacuation Route
- Secondary Evacuation Route
- Conditional (4x4 access)

Reception Centres
- Kingfisher Community Hall
- Mabel Lake Resort & Marina

Reception Centres in Kingfisher/Mabel Lake	
Kingfisher Community Hall	3337 Mabel Lake Road
Mabel Lake Resort & Marina	3514 Enderby Mabel Lake Road

Map produced by Frontline Operations Group. January 9, 2020.

Traffic Management

Coordination

The EOC, in coordination with the RCMP, will provide direction on the best routes to be used to facilitate an evacuation. Routes may need to be selected at the time of the incident depending on the type of hazard and degree of risk. This plan will identify the best/most direct routes out of Kingfisher/Mabel Lake community, with a focus on high risk areas. Evacuation Routes should be separate from disaster routes intended for use by emergency responders and support vehicles. Since there is only one main access and egress route for the Kingfisher/Mabel Lake community – via the Enderby Mabel Lake Rd – it is possible that excess traffic could quickly impede the ability to evacuate residents. This can be managed through the use of phasing techniques, as previously discussed.

The following factors should be considered when selecting evacuation routes:
- Most evacuees utilize personal transportation
- Approximate vehicle capacity thresholds for routes based on
  - An average flow rate of 800-1,200 vehicles/hour/lane on arterial roadways
  - Average flow rate of 1,800 vehicles/hour/highway
- In Kingfisher the population of commuters for the community is low and is unlikely that it would impede on traffic flow rates. Approximately 50 people total commute from Kingfisher: 20 between 5:00am-5:59am, 15 between 7:00am-7:59am, 10 between 8:00am-8:59am and 10 between 12pm-4:59am (Census 2016).
- The average vehicle occupancy is four persons but evidence from real life evacuation show that families will tend to use two vehicles if they have them
- Route markings and identification
- Safety and condition of infrastructure
  - Bridges
  - Roads
  - Flood prone areas
  - Slopes at risk of debris slide

Traffic Control

The EOC Director and RCMP liaison will approve traffic controls and management in consultation with MoTI. Measures may be established and controlled at key intersection and at access control points to major evacuation routes if needed.

In some cases, it may be necessary to control traffic on other routes to minimize impact on the evacuation traffic. The following information, may assist in planning;
- Many commuters will return home to gather family and belongings before beginning an evacuation
- Time of day (morning vs. night) and day of the week (weekday or weekend) will dictate where people will be and will affect the number of evacuees that may need assistance and/or transportation

- Evacuation routes may require maintenance and blockage extrication to keep routes flowing. On the highway, this is the responsibility of MoTI, all other roads throughout the Kingfisher/Mabel Lake area are the responsibility of the RDNO.
- Emergency and support vehicles require clearly identified lanes/routes to provide not only access to the evacuation/shelter-in-place zone, but also to exit from the zone
- Assembly points need to be locations familiar with the population at risk
- Mass transit routes may require a designated route or lane to facilitate and promote use of this means of evacuation

Strategies

Many traffic management strategies exist to help expedite the evacuation process. While all strategies are intended to improve evacuation traffic flow, any potential impacts should be considered in decision-making.

Implementing traffic management strategies in an evacuation are complex. To ensure that traffic management strategies are coordinated and implemented safely, it is recommended that a Traffic Management Plan (TMP) be developed as an addendum to the Evacuation Route Plan. The TMP would outline the specific traffic control devices that will be used and how they will be implemented. This may include text descriptions, customized traffic control layouts, and customized drawings of temporary traffic control devices (signs, signals, lighting, channelizing devices, paving markings, etc.) and traffic control persons. The TMP will meet standards of MoTI's *Traffic Management Manual for Work on Roadways.*

Some traffic management strategies to consider are:

- Detours
- Road Closures and Access Control such as restricting inbound traffic to Emergency Services
- Flashing Signals
- Traffic Cones and Delineators
- Evacuation Lane Reconfiguration
- Signage
    - Dynamic Message Signs
    - Portable Changeable Message Signs
    - Printed Signage
- Modifying Highway Travel Speed
- Signal Timing Modification

Control Points

- Traffic controls should be established at key intersections and at access control points to major evacuation routes as needed
- In some cases, it may be necessary to control traffic on other routes to minimize the impact on the evacuation traffic
- The RCMP in collaboration with the IC and the EOC Operations Chief will identify the appropriate areas for traffic control points
- Each traffic control point should have a minimum of one tow truck equipped with fuel to assist stranded motorists or to remove disabled vehicles – on highway routes this should be coordinated by MoTI
- If possible, an ambulance should also be assigned to the primary control point

Kingfisher/Mabel Lake Traffic Control Points

To HWY 1 @ 3 Valley Gap

To Enderby

To Lumby/Vernon

Legend
- Kingfisher/Mabel Lake Boundary
- 3km Trigger Zone
- ▲ Traffic Control Points
- Primary Evacuation Route
- Secondary Evacuation Route
- Conditional (4x4 access)

Access Control intersections to consider in Kingfisher/Mabel Lake

Enderby Mabel Lake Road and Rhonan Peters Road
Enderby Mabel Lake Road and 3 Valley Mabel Forest Service Road
Enderby Mabel Lake Road and Cooke Grassy Forest Service Road
Enderby Mabel Lake Road and Old Mabel Lake Road
Enderby Mabel Lake Road and Ashton Cooke Road
Enderby Mabel Lake Road and Trinity Valley Road

0   2   4 km

Map produced by Frontline Operations Group. January 7, 2020.

En-route Services

During a mass evacuation, evacuees will often need support en-route to keep moving. Making provisions, such as fuel stations, portable restrooms, water, tow trucks, dispersed emergency services, and shelter opportunities along the evacuation routes improve effectiveness of an evacuation. However, given the relatively short travel time and the limited space along Enderby Mabel Lake Rd. this may not be viable or necessary; at minimum a tow truck should be placed mid-way to assist with obstructions,

Fuel

Ensuring adequate fuel supplies is a key component to a successful evacuation. Fuel service must be maintained during emergencies both at pump stations in the evacuating community and at services stations en-route.

Local gas stations will be notified of a mass evacuation, as early as possible, to enable them to increase their fuel supplies in preparation for a surge in demand. If time and resources allow, fuel trucks will be staged at various locations en-route to provide emergency fuel supply and reduce the likelihood of stalled vehicles interrupting traffic flow.

Depending on the evacuation scenario, the EOC may want to consider rationing fuel to a dollar or litre limit to help avoid fuel outages. It is common during emergencies that people panic and purchase excessive amounts of fuel which can lead to insufficient fuel supplies.

Tow Trucks

Tow trucks will be stationed to attend to vehicles that are blocking traffic lanes due to mechanical problems, insufficient fuel or collisions.

Temporary Comfort Stations

If time and resources allow, temporary comfort stations will be set up along the evacuation route with portable toilets and water in locations that do not have existing rest stops.

Law Enforcement

If time and resources allow, law enforcement will be dispersed along evacuation routes to expedite response to incidents that present a safety risk to the public and/or first responders.

Security

As an area is being evacuated, access control measures must be established. Security may be obtained by establishing staffed access control points and barricades at key locations around the perimeter. The objective of access control is to:

- Provide a controlled area from which an emergency evacuation will take place and prevent entry by unauthorized persons
- Protect lives by controlling entry into hazard areas
- Maintain law and order in the hazard area
- Specific criteria for allowing entry into closed areas will be established for each incident

No Access

- Prohibits the public from entering the closed area
- Authorized personnel are the only ones allowed access (i.e. local, provincial work as required)
- Media representatives will be allowed access on a controlled basis

Temporary Access

- Allows persons into closed areas according to access criteria established by the EOC director
- Entry criteria should define the persons who will be allowed and whether motor vehicles are allowed
- A log of all vehicles/people entering the area will be kept at each point and forwarded to the EOC
- Staffing at access control points will be assigned in coordination with the RCMP and may include members of RCMP, SAR, or contracted security professionals

Access Control intersections to consider for the Kingfisher/Mabel Lake community
Enderby Mabel Lake Rd. and Rhonan Peters Rd.
Enderby Mabel Lake Rd. and 3 Valley Mabel FSR
Trinity Valley Rd and Cooke Grassy FSR
Enderby Mabel Lake Rd. and Old Mabel Lake Rd.
Enderby Mabel Lake Rd. and Ashton Cooke Rd.
Enderby Mabel Lake Rd. and Trinity Valley Rd.

Notification

The notification of an evacuation in a timely and effective manner is one of the most important steps that must be completed during an emergency event. Under the *Local Authority Emergency Management Regulation*, the RDNO is required to establish "procedures by which those persons who may be harmed or who may suffer loss are notified of an emergency or impending disaster".

Timely notification is essential to ensure that residents are aware of the emergency situation and have all the information needed to evacuate safely. For further information and recommendations on communications during evacuations, refer to the EOC Communications Toolkit on the EMBC website.

There are several ways in which RDNO can notify their community of an evacuation, including:

- ✓ Broadcast media – local radio and television
- ✓ Sirens
- ✓ Public address systems
- ✓ Door-to-door visits
- ✓ Notice boards

- ✓ Social media platforms (Facebook, Twitter, etc)
- ✓ Amateur radio
- ✓ Website
- ✓ Print media
- ✓ Automatic notification systems

**Send a copy of all evacuation notices to the appropriate EMBC PREOC, who can then share and amplify the information on Emergency Info BC's website, Twitter, and Facebook feeds.

Resident Notification System

The absence of cellular service east of Ashton Creek poses a significant challenge for notification during an emergency. The RDNO will need to coordinate with members of the Kingfisher Community Hall to coordinate a radio communication system, SAT phone procedures, and identify contact persons that will monitor communications prior to the arrival of rescue personnel. This will require identifying appropriate community member(s), maintaining a radio system and SAT phone, and providing training to the community member(s).

Door-to-door

Door-to-door notification is still one of the best practices for notifying residents of an Evacuation Order. Trials and experience have shown that door knocking, when conducted by the emergency services, is the most effective method of issuing notifications during an emergency or evacuation, it is however, extremely resource intensive and slow.
If door knocking is used as a method of ordering evacuations, then it is recommended that doorknockers:
- ✓ Are uniformed members of a recognized organization
- ✓ Work from a script
- ✓ Provide handouts of written information to residents if possible

Generally, upon notification of the Order and through request, the following agencies will coordinate the door-to-door notification process for the impacted area(s) on behalf of the community and RDNO.

- ✓ RCMP
- ✓ The volunteer Fire Department
- ✓ Search and Rescue (SAR)

If the capacity to provide door-to-door notifications is beyond what the RDNO can provide, a resource request can be submitted to the PREOC to source additional resources.

The steps for facilitating door-to-door notifications include:
- ✓ Request the assistance of the RCMP, Fire Department or SAR, and provide:
  - o Evacuation Notification Kit containing:
    - ▪ Evacuation clipboard with Evacuation Recording Procedures and Evacuation Logs
    - ▪ Colour-coded flagging tape rolls
    - ▪ Waterproof pens
  - o Copies of the Evacuation Order with a map of the geographic boundaries of the affected area
- ✓ Ensure each notification team has a method of communication (i.e. phone or radio)

House Marking

In British Columbia, a system of flagging tape in four different colours has been adopted which allow police and volunteers to quickly identify the status of any residence in an evacuation area.

The tape is attached to a location that can be viewed during a windshield evaluation to identify residents who:

BLUE	Not home/no answer and must be canvassed again
PINK	Have been notified of an order to evacuate
YELLOW	Have been verified as evacuated
ORANGE	Have been notified and are refusing to evacuate

Special Provisions for At-risk Populations

Residents of the impacted area may have specialized needs for evacuating. The aged, infirm, hospitalized, mentally or physically disabled, residents of nursing homes or retirement homes, daycares, schools, etc. may require specialized transportation and care to evacuate.

The Kingfisher/Mabel Lake community does not have any of these facilities within the community. There is, however, a youth camp (Mackenzie Camp) that runs through July and August. It hosts programs for youth aged 6-17 years of age and is located on the south side of the Shuswap River and is accessed via pontoon boat. Those responsible for the care of this special group have an evacuation plan for their site and a pre-selected destination where the needs of the special groups can be managed. They should be notified at the earliest possible time that an evacuation may occur – even before the Alert stage if possible. At this time, the EOC should engage in discussion with the facility operators to determine trigger points for evacuating this facility.

There also may be a portion of the population with special needs residing in their family or own homes and may not have a personal evacuation plan. Special populations under home care need to have a preparedness plan and identify themselves to emergency services personnel to ensure that they can be safely removed from danger. It is recommended that the RDNO – Kingfisher/Mabel Lake – develop a voluntary registry to identify residents that may require additional assistance to evacuate their home.

Emergency Support Services

The local authority is required under Section 2 (3) (f) of the Local Authority Emergency Management Regulation to: "coordinate the provision of food, clothing shelter, transportation and medical services to victims of emergencies and disasters, whether that provision is made from within or outside of the local authority".

The B.C. government is currently updating the provincial Emergency Support Services (ESS) program through a project that is digitizing and modernizing ESS delivery.

> As part of the modernization project, residents that are under evacuation Alert or Order can self-register for [Evacuee Registration & Assistance](#) (ERA), a new digital platform designed to increase the efficiency and speed of service for evacuees across the province.

ESS will assist in determining types and locations of emergency shelter.

Sheltering is the process of providing for the basic needs of the affected people away from the immediate or potential effects of the hazard. In British Columbia, these provisions are provided by ESS. Under their new agreement, in situations where up to 500 evacuees (Level 2 response) require care, the RDNO can request assistance from the Canadian Red Cross (CRC) Disaster Management Team.

ESS will principally be involved in evacuation in the event that evacuees need to be sheltered. An ESS Liaison may however be activated during a shelter-in-place incident in anticipation of a transition to evacuation.

During an evacuation, the role of ESS is to:
- Receive evacuees at Emergency Reception and Lodging Centres (ERLC)
- Provide food, water, and psycho-social support to evacuees
- Maintain a record of all persons who report to and ERLC
- Allocate resources to assembly points, depending on the size and scope of the emergency

Type of Emergency Lodging Services

Evacuees may be accommodated in the following ways:
- Private Accommodation: lodging with persons volunteering accommodation in their own home or with family or friends
- Commercial Accommodations: lodging in motels, hotels, hostels or commercial boarding homes
- Group Lodging Facilities: buildings such as schools, churches, community centres, arenas, auditoriums or other public facilities not normally used for living purposes that are adapted as dormitory types accommodation for large numbers of people in an emergency
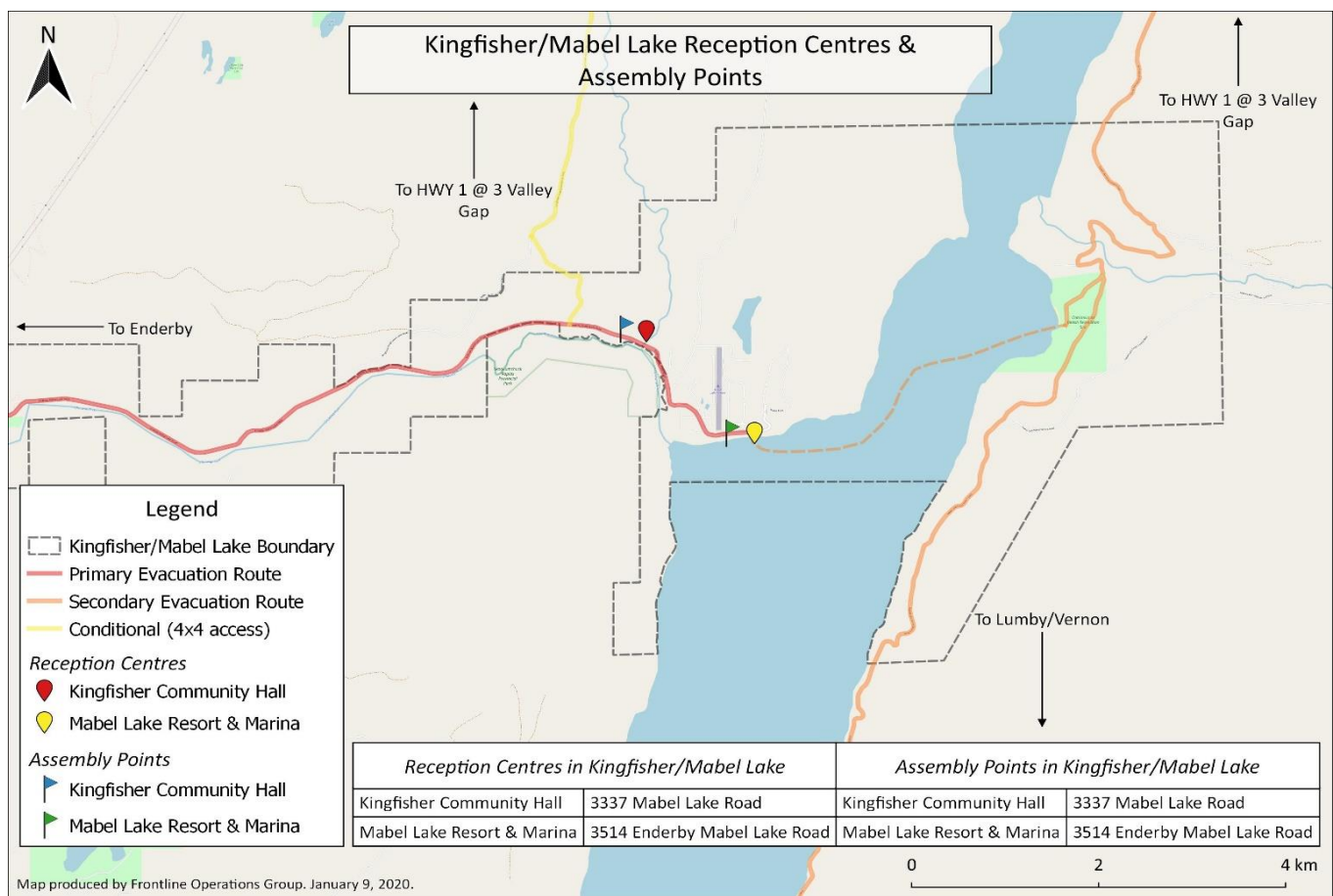
Minimum Evacuee Care Requirements

The facility used as a shelter must be secure, meaning that it is a safe location that protects the evacuees from further danger. The minimum service delivery requirements for physiological needs of the evacuees are maintaining a normal body temperature, alleviation of thirst, provision of facilities for excretion (toilets), providing the opportunity for rest and providing meals.

Shelter Activities

The activities that occur in Group Shelter Facilities:
- Registration of evacuees
- Building security
- Dormitory/rest areas
- Sanitation facilities (washrooms/bathing)
- Food storage, preparation, and service
- Cleaning and maintenance
- Preventative medicine, public health and first aid
- Communications and information
- Management of supplies, resources and records

Kingfisher/Mabel Lake Reception Centres & Assembly Points

Legend
- Kingfisher/Mabel Lake Boundary
- Primary Evacuation Route
- Secondary Evacuation Route
- Conditional (4x4 access)

Reception Centres
- Kingfisher Community Hall
- Mabel Lake Resort & Marina

Assembly Points
- Kingfisher Community Hall
- Mabel Lake Resort & Marina

Reception Centres in Kingfisher/Mabel Lake		Assembly Points in Kingfisher/Mabel Lake	
Kingfisher Community Hall	3337 Mabel Lake Road	Kingfisher Community Hall	3337 Mabel Lake Road
Mabel Lake Resort & Marina	3514 Enderby Mabel Lake Road	Mabel Lake Resort & Marina	3514 Enderby Mabel Lake Road

Map produced by Frontline Operations Group. January 9, 2020.

Host Communities

When it is not possible to keep evacuees in the impacted community, it is common to ask neighbouring communities to help by providing shelter and care to the evacuees as needed. It is important for First Nations and Local Authorities to reach out to potential host communities in advance of an evacuation to pre-establish relationships and communication channels. There is no obligation for another community to act as a host community; fostering proactive, strong relationships with other communities will encourage mutual assistance in times of need.

For information on how host communities can be reimbursed for eligible costs associated with hosting another community's evacuees, refer to the Host Community Response Costs memo located on EMBC's website.

If possible, evacuees should be hosted in a community that is similar to the one they are evacuating from. For example, if evacuating a First Nations community, consider sending evacuees to another First Nations community of similar size where evacuees may feel more comfortable.

Note: do not send evacuees to another community without first confirming the host community is able, willing, and ready to receive and support your evacuees. Include EMBC in these discussions, wherever possible.

There are a few ways in which an evacuating First Nation or Local Authority can support a host community:
- ✓ Confirm with the host community that they are able to receive evacuees, and provide details on how many evacuees are being sent and any special considerations they should be aware of (e.g. number of vulnerable people, etc.)
- ✓ Provide an approved Extraordinary Evacuee Authorization Form to any evacuee not covered under an Evacuation Order to ensure the host community's ESS team has appropriate validation to support the evacuees (See Section 7.7 for more information)
- ✓ When possible, evacuate vulnerable people with a support person (e.g. health care worker or care giver) able to assist with their safety, reducing the burden on the host community
- ✓ Provide a regular information-briefing schedule for the host community and evacuees
- ✓ Maintain consistent, planned contact between the evacuating community's officials and the host community's officials
- ✓ Evacuate local community staff with their residents so they can provide support to the host community in matters concerning their residents
- ✓ Where possible, designate a Community Navigator to act as a liaison for the evacuees and provide a point of contact for the host community emergency support structures. See "Community Navigators" info box above
- ✓ Further support for the host community's ESS team can be provided via a request through EMBC

Pets and Service Animals

Evacuation and care of domestic animals is an increasingly important issue for emergency managers and the public. Providing options for domestic animal care during emergencies is one way to prevent homeowners from remaining in evacuation zones because they refuse to leave pets behind. It is the decision of the local authority emergency program if the community would like to incorporate domestic animal care into emergency planning and response.

In most cases, ESS coordinates pet services with assistance from local animal shelters and non-profit organizations. An Operational Guideline for Pet Services is currently under review by the Provincial Emergency Program. The preparation and planning for pets in reception centres (or pet-specific facilities if required) should be done in consultation with local or regional community groups such as Canadian Disaster Animal Response Team (CDART) and the local BC SPCA chapter.

Service animals are domestic animals trained to perform a specific service to assist their owner and should not be considered as household pets. Individuals with disabilities who are accompanied by qualified service animals must be allowed access to any location where the general public is allowed, and consideration should be made as to how to house individuals and families with service animals.

People, who have pets and require group lodging, will optimally find housing with a friend and family member. Co-located owner-pet shelters will be identified in sheltering communities where available, as an option for people, who evacuate with their pets. Use of such shelters should be encouraged and publicized, if other options are not possible.

Pet shelters may not be immediately adjacent to the human population shelter. In such cases, transportation to and from the shelters may need to be arranged. Separation of pets and owners should be avoided, if possible, but pets should not take the place of a person, if resources are limited. Service animals should not be separated from their owners, and adequate space for people with service animals will need to be provided in group lodging sites. Keeping people and pets together decreases stress for both people and their pets and is less labor-intensive.

> **For guidance on how to prepare for an evacuation with your pet(s) visit www.preparedbc.ca where you can find valuable information and templates.**

Livestock

Livestock are an important source of livelihood in the RDNO and in and around the Kingfisher/Mabel Lake area. The basic responsibility for livestock protection rests with the individual producers and livestock owners who should have their own emergency plans in place to ensure that their exposure to loss is appropriately reduced. The EPA vests some responsibilities with local government if a State of Local Emergency (SOLE) is declared but a SOLE is not required to evacuate livestock during the Alert stage, or for Local Authorities and First Nations to be eligible for reimbursement of these costs.

Specifically, a local government may "cause the evacuation of persons and the removal of livestock, animals and personal property from any area of the local government's jurisdiction that is or may be affected by an emergency or a disaster and make arrangements for the adequate care and protection of those persons, livestock, animals and personal property."

According to the Ministry of Agriculture the definition of a "qualifying farm business" is *a livestock operation that has "farm" classification under the BC Assessment Act, Classification of Land as a Farm Regulation.*

The Livestock Act defines livestock as "cattle, goats, horses, sheep and game and includes any other animal designated by regulation". It should be noted that local authorities and general public will not be reimbursed for relocating hobby farms, horses not raised for sale, exotic animals, or pets/animals kept within the confines of a home.

Livestock producers are encouraged to register their land with the BC Cattleman's Association BC Premises Identification for Livestock & Poultry program. The BC Ministry of Agriculture can utilize the information gathered to plan, prepare for, respond to, or recover from emergencies that threaten animal or public health.

Relocation of livestock, if required, should be done during the Evacuation Alert stage. Many of the costs for the movement of livestock and the supports provided to livestock producers are eligible response costs through EMBC, when certain conditions are met[4].

A representative from the Ministry of Agriculture may be available in the PREOC to help with the coordination needed for livestock relocation. Refer to the EMBC Policy 2.01 **Provincial Support for Livestock Relocation During an Emergency** for more information on how to evacuate livestock and what constitutes as eligible costs for reimbursement. Also, refer to the Ministry of Agriculture's **Livestock Relocation website** for guidelines and tools.

> **Contact EMBC prior to relocating livestock to confirm eligible costs for reimbursement and to receive a task number.**

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[4] Farm businesses – Farming practices where reasonable expectation of income, based on sales, is anticipated including, but not limited to, the rearing and keeping of livestock.
Livestock and Livestock raising – Does not include the keeping of pets such as canine or feline species, hobby farms or animals kept within the confines of a home.

The RDNO must be prepared to work in conjunction with several stakeholders to ensure the safe and efficient evacuation of livestock, the following considerations should be made:

- · A Ministry of Agriculture representative should be requested to attend the EOC and at the very least advised of the incident and the potential for displaced animals.
- · Canadian Disaster Animal Response Team (CDART) needs to be contacted and alerted of potential support requirements. The intent would be for CDART volunteers to work in conjunction with ESS under the Operations Section at both the incident level and at the EOC.
- · Livestock evacuation is based on the same premise as that for people. If time allows, the three stages, Alert, Order and Rescind will apply.
- · The livestock Alert level may precede that of people due to the loading and transport times required.

Further considerations for animals and livestock evacuations:

Establishing liaisons with the following organizations could assist with evacuations of animals and livestock:
Local Humane/Societies for the Prevention of Cruelty to Animals
Local Veterinarians
British Columbia Veterinary Medical Association
Cattleman's Association

As part of the greater evacuation planning process, the following lessons from previous evacuation incidents have should be considered during the planning process:

When a reception centre cannot handle pets:
- · the location of a pet reception centre must be close to the human centre, so evacuees can be close to their pets
- · Use same registration process for pets as for people
- · Some people chose to live in vehicles rather than be separated
- · Have an excellent working relationship with local kennels and animal boarding facilities.
- ·

When a reception centre has the facilities for evacuated pets and people:
- · A detailed registration system for pets is needed
- · Electronic records allow for easy retention of information and forwarding if animals are moved into care or another community
- · Clear information on owner (i.e.: contact information, location, etc.)
- · Access to veterinarian/vet services
- · Cleaning schedule and staff
- · Good communication with the rest of the reception centre
- · Restricted access to pet area

Public Information

Once the decision to issue an evacuation alert or order has been made, the local authority will provide information to the public through official channels, including details about the hazard conditions, areas affected and evacuation activities and actions they should take to ensure safety.

All public notifications and information for advanced notice evacuations will be coordinated through the local government EOC Information Officer and approved by the EOC Director. Pre-scripted messages for use by the EOC Information Officer can be found in the Operational Plan.

Formulation and distribution of public information will follow RDNO media policy and procedures and align with the Emergency Communications Plan.

Key Considerations

Public information should consider:

- ✓ Multiple sources – timely, accurate, relevant information should be provided through official channels
- ✓ Repetition – clear, concise messaging should be repeated
- ✓ Timeliness – information should be shared with the public as early and possible and regular updates should be provided
- ✓ Clear messaging – messages should be simple, clear, concise, consistent and free from technical jargon
- ✓ Translation and language options – if needed, key messages should be translated for residents and visitors

Message Dissemination

The local government will share the information through the following channels:

Local Government Website

The main portal for up-to-date information will be the local government/municipal website. An emergency alert will be posted on the home page of the website. Emergency alerts will only be issued for current emergency events, including evacuation alerts and orders. Instructions for people in the evacuation area, regular updates and situation reports will be posted as new information becomes available.

Radio and Television Broadcasts

The RDNO recognizes that radio and television broadcasters are a critical resource during an emergency. Residents and visitors rely heavily on local broadcaster for emergency information.

Evacuation information and updates will be supplied to local and provincial media sources for broadcast on radio and television. This will be particularly effective if the internet is not available or if people are in their vehicles and need updated information while travelling.

If the municipal website is functioning, radio and television broadcasters will be asked to monitor the local government website for the most current updates and to broadcast the information in a simple, clear, concise, and consistent format. Information will also be shared with broadcasters through media releases.

In Kingfisher/Mabel Lake area, information will be broadcast on nearby community radio stations such as Enderby:

- CBC Radio One, CBYX-FM 92.7 FM
- Beach Radio, CKIZ-FM-1 93.9FM
- Sun FM, CICF-FM-4 98.7 FM
- EZ Rock, CKXR-FM-2 104.3 FM

Social Media

In addition to the RDNO website, local governments will share timely information regarding the evacuation on Facebook and Twitter. The posts will include a link to the municipal website for more information.

 http://www.rdno.ca

 RDNorthOkanagan, Mabel Lake Resort and Marina, Mabel Lake Provincial Park Campground

 @NorthOkanaganEM, @MabelLakeBC,

 mabel_lake,

Reciprocal Agreements/Arrangements

The RDNO has a good working relationship with the City of Enderby regarding emergency response and evacuation needs. Enderby will likely play a large role in providing shelter, reception centres or interim resources for evacuees that require lodging or are passing through the community. Due to the minimal capacity that the City of Enderby can offer it will be important to build relationships with Salmon Arm and Vernon, to ensure that evacuees have a nearby refuge.

Administration and Logistics

The information throughout this plan can be used by the public, emergency management team and partner agencies alike for general knowledge about the evacuation process for the RDNO – Kingfisher/Mabel Lake community. It can also be used for public education campaigns and training purposes. The detailed plan, in the form of checklists, decisions trees, templates, mapping, contact information, etc. can be found in the accompanying Operational Plan.

Plan Development and Maintenance

The RDNO, will ensure that the Evacuation Route Plan is:
- Updated annually to reflect current contact information, position titles, etc.
- Reviewed after events or exercises and updated if required, reflecting lessons learned and changes in other plans
- Practiced annually with partner agencies and stakeholders through a tabletop exercise or similar, to ensure compatibility and relevance

Resource	URL
BC Emergency Management Systems Guide (BCEMS)	https://www2.gov.bc.ca/gov/content/safety/emergency-preparednessresponse-recovery/emergency-management-bc/bcems
EOC Communication Toolkit	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-response-recovery/localgovernment/local_gov_communications_toolkit.pdf
Declaring a State of Local Emergency in BC	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-responserecovery/embc/policies/declaring_a_state_of_local_emergency_in_bc_jan_2019.pdf
EMBC Emergency Operations Centre Operational Guidelines	https://www2.gov.bc.ca/gov/content/safety/emergency-preparednessresponse-recovery/local-emergency-programs/guidelines
EMBC Regional Office	https://www2.gov.bc.ca/gov/content/safety/emergency-preparednessresponse-recovery/contact-us
Emergency Support Services (formerly Emergency Social Services) Field Guide	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-response-recovery/ess/fieldguide/essfieldguide.pdf
EOC Expenditure Authorization Form (EAF)	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-response-recovery/localgovernment/eoc-forms/eoc_expenditure_authorization_form.pdf
Evacuee Living Assistance Guidelines	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-responserecovery/embc/policies/503_evacuee_living_assistance_annex_-_guidelines_aug_2016.pdf
Financial Assistance for Emergency Response and Recovery Costs	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-response-recovery/localgovernment/financial_assistance_guide.pdf
Host Community Response Costs	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-response-

	recovery/localgovernment/emergency_management_bc_-_host_community_response_costs_memo.pdf
Introduction to the Incident Command System	https://www2.gov.bc.ca/assets/gov/environment/air-landwater/spills-and-environmental-emergencies/docs/intro-ics.pdf
Local Authority Emergency Management Regulation	http://www.bclaws.ca/civix/document/id/lc/statreg/380_95
Managing Access to Areas Under Evacuation Order	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-responserecovery/managing_access_to_areas_under_evacuation_order.pdf
Ministry of Agriculture Livestock Relocation	https://www2.gov.bc.ca/gov/content/industry/agricultureseafood/business-market-development/emergencypreparedness/livestock-relocation
Provincial Support for Livestock Relocation During an Emergency, EMBC Policy 2.01	https://www2.gov.bc.ca/assets/gov/public-safety-and-emergencyservices/emergency-preparedness-responserecovery/embc/policies/201_provincial_support_for_livestock_relocation_policy_aug_2016.pdf
Evacuee Registration and Assistance Tool	https://ess.gov.bc.ca/