



# Regional Emergency Management Project

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# Regional Emergency Management Project

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prepared by

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for



## Acknowledgements

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## Acronyms

BCERMS	BC Emergency Response Management System
BCR	Band Council Resolution
CDT	Community Development Trust
DFA	Disaster Financial Assistance
ICS	Incident Command System
INAC	Indian and Northern Affairs Canada
EEC	Emergency Executive Committee
EERO	Environmental Emergency Response Officer
EM	Emergency Management
EMBC	Emergency Management British Columbia
EMC	Emergency Management Committee
EMP	Emergency Management Program
EMO	Emergency Management Organization
EOC	Emergency Operation Centre
EPA	Emergency Program Act
ESS	Emergency Social Services
ESSD	Emergency Social Services Director
EPC	Emergency Program Coordinator
FNESS	First Nations Emergency Services Society
FNMPBI	First Nations Mountain Pine Beetle Initiatives
IMT	Incident Management Team
INAC	Indian and Northern Affairs Canada
JEPP	Joint Emergency Preparedness Program
JIBC	Justice Institute of BC
JOP	Job Opportunity Program
MAL	Ministry of Agriculture and Lands
MOE	Ministry of Environment
MOFR	Ministry of Forests and Range
MOTI	Ministry of Transportation and Infrastructure
MPB	Mountain pine beetle
MST	Mobile Support Team
NH	Northern Health
NRCAN	Natural Resources Canada
OBAC	Omineca Beetle Action Coalition
OFC	Office of the Fire Commissioner
PEP	Provincial Emergency Program
PREOC	Provincial Regional Emergency Operations Centre
RCMP	Royal Canadian Mounted Police
RDBN	Regional District of Bulkley-Nechako
RDFFG	Regional District of Fraser-Fort George
SPU	Sprinkler Protection Units
WMB	Wildfire Management Branch, Ministry of Forests and Range (former Protection Program)
UBCM	Union of BC Municipalities
UNBC	University of Northern British Columbia

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## 1.0 Introduction

Over the last several years there have been a number of changes which have impacted, and are expected to impact, emergency management activities throughout the world. Within the Omineca Beetle Action Coalition region, the infestation of mountain pine beetle (MPB) in the forests, changes in climate, and increases in industrial traffic present the potential for increased threats to communities. Communities have worked hard to prepare for and manage the current level of emergencies and disasters and plan for any subsequent changes as a result of these phenomena.

Many local governments within the OBAC region have prepared plans to deal with a wide range of emergencies. The most common form of emergencies or disasters that are planned for, and responded to by communities within the OBAC region include: hazardous materials spills; flooding; wildfires; severe weather (such as snowstorms); and industrial accidents.

OBAC communities are generally well prepared for emergencies or disasters and have made best use of the existing resources available to them. However, inter-community and cross-regional collaboration between governments, practitioner organizations and professionals can assist in further developing and ensuring that all communities will be able to deal with potential increases in frequency and severity of emergencies and disasters. Ensuring a state of readiness to protect people and property against natural or human-caused emergencies and disasters is paramount and can support the region's overall diversification efforts.



In some cases, neighboring communities already work together in formalized arrangements. In many situations, the relationships are not currently defined. Efforts to work together must fit with First Nations and local government leaders' and emergency practitioners' interest level and ability to participate. This document reflects the good work done so far and presents ideas on additional opportunities for collaboration between senior and local governments, and First Nation communities. Although First Nations are included as possible participants in many of the actions, First Nations communities' participation will be entirely dependent on individual community needs, priorities, and interests. OBAC looks forward to helping to facilitate this during project implementation and incorporating ideas and opportunities as the project evolves.

This report identifies recommendations and actions that use local and regional resources to their fullest potential and suggests solutions to the unique challenges of the region by presenting opportunities for inter-community and cross-regional collaboration. OBAC looks forward to continuing to support discussions between neighbouring communities, local businesses, and leaders of regional initiatives.

## 2.0 Project Goal

The overall goal of this project is to suggest ways that OBAC communities can strengthen emergency management and personal preparedness in the region by using a collaborative approach that addresses both local and regional level emergencies and takes full advantage of available synergies and economies of scale. Five recommendations and associated actions have been developed to help achieve this goal and these are presented in Section 5 of this document.

It is important to note that this project provides analysis and recommendations at the regional level. As such, this project does not document specific programs, contacts, connections, and unique opportunities at the local community level. Each community's plans document local service providers, agencies, ministries and their links, hence these details are not documented here.

## 3.0 Background

### 3.1 Emergency Management Mandates, Roles, and Responsibilities

In British Columbia, emergency management relies upon shared responsibility between all levels of government, private industry, and the public. There are a number of key pieces of federal and provincial legislation that mandate the authorities and responsibilities for emergency preparedness, response, recovery, and mitigation.

#### *Federal Government*

The federal government has enacted two pieces of legislation that address emergency management matters. The *Emergencies Act* outlines the type of emergencies to which the Government of Canada will act while the *Emergency Preparedness Act* outlines the responsibilities of the federal government and its institutions to ensure that they are prepared for any emergency or disaster.

#### *Provincial Government*

The provincial government has the *Emergency Program Act* (EPA) where the roles and responsibilities are set out for both the provincial and local governments. Specifically, this Act, and its regulations, address the following areas of responsibility:

- Clarifies the roles and responsibilities of local governments and the provincial government;
- Provides extraordinary powers to a local government and/or the provincial government when required;
- Requires a local government to create and maintain an emergency management organization;
- Enables the provision of Disaster Financial Assistance to victims of disasters; and
- Provides an exemption from civil liability to emergency service workers.



The Act requires that all provincial ministries and agencies have emergency plans in place and that they are based on the BC Emergency Response Management System (BCERMS). There are four key ministries that have a specific role within the provincial government that are discussed in this report.

The Provincial Emergency Program (PEP) is a division of Emergency Management BC (EMBC) which is based in the Ministry of Public Safety and Solicitor General. The mission of PEP is to enhance public safety and reduce property and economic loss from emergencies and disasters. PEP promotes individual and community awareness and preparedness; advises the province, local governments and First Nations of emergency prevention strategies; coordinates provincial response to emergencies and disasters; collaborates with all agencies to provide a coordinated approach to recovery; and provides support (funding, resources, expertise) to local governments during emergencies and disasters.

The Ministry of Forests and Range (MOFR) Wildfire Management Branch (WMB) is tasked with providing response to wildfires on Crown lands. Its main objective is to protect provincial forest and grassland assets. However, the branch prioritizes fires within interface areas and works closely with local fire departments to protect lives and property. The WMB is active in local planning processes to deal with fuel management, emergency planning matters, and cross-training in wildland and structural fire fighting at a local level.

The province also provides assistance to local governments through the Ministry of Environment (MOE). This ministry provides expertise in the areas of flood management, through its River Forecast Centre, and hazardous materials response when the environment has been impacted, through its Environmental Emergency Management Program. The program's main objective is to ensure that proper clean up and containment takes place for hazardous materials spills.

The Ministry of Agriculture and Lands (MAL) has a role in emergency management by assisting local agricultural producers in developing emergency plans and supporting the agriculture sector during an emergency or disaster. The ministry has developed an Emergency Response Plan to minimize loss to agricultural sectors, assist agricultural sectors in continuing daily operations during emergencies, and reducing the economic consequences of emergencies or disasters affecting agricultural activities.

## *Local Governments*

In addition to the plans enacted for all federal departments and provincial ministries, local governments are also required to establish emergency plans. Prior to 2005 the EPA only required that municipalities have emergency management programs in place. Regional Districts that wished to create emergency plans would request additional powers under the Act to provide the service. The Act was amended in 2005 to require all local governments have plans and programs in place. The responsibilities that local governments are charged with are outlined in the associated regulations and within local bylaws. These local authorities are responsible for:

- Conducting periodic reviews and updating of emergency plans, policies, and procedures;
- Maintaining training and exercise programs;
- Identifying procedures whereby emergency resources (i.e., personnel, equipment, facilities, and financial resources) may be obtained;
- Establishing emergency plan activation procedures;
- Establishing public warning procedures;
- Coordinating the provision of food, clothing, shelter, transportation, and medical services to victims of emergencies and disasters; and
- Establishing priorities for restoring essential services for services provided by the local government or by service providers.

## *First Nations Governments*

For First Nation communities, the Minister of Indian and Northern Affairs Canada (INAC) is responsible for identifying and planning for the types of emergencies or disasters than can occur within, or related to, First Nations communities. INAC works closely with PEP and First Nations Emergency Services Society (FNESS) to support First Nation communities in conducting emergency management initiatives. PEP provides support to these communities, upon request, just as it does for non-first Nation communities and administers all claims for reimbursement for response and recovery costs with the understanding that all costs incurred on reserve are refundable to the province from INAC.

In most cases, First Nation communities establish their programs via a Band Council Resolution and follow the same general guidelines and requirements as a local government. In order to maintain consistency in structure and terminology First Nations are encouraged to use BCERMS as are their neighboring non-First Nation communities and regional districts.

### 3.2 Local Emergency Management Programs

Local emergency management programs (EMPs) are implemented by local governments to ensure their legislative responsibilities are met, and that public safety issues are addressed. Although not legislated to do so, First Nations may also implement EMPs to implement initiatives related to public safety, education and emergency coordination.

EMPs consist of four main components – preparedness, response, recovery, and mitigation. Preparedness refers to the activities that a community takes to ensure an effective response and recovery from emergencies and disasters while response refers to the actions that are taken to address the short-term effects of a disaster. Recovery consists of the actions that are taken to restore community life pre-disaster condition. This includes the social, economic, service, and infrastructure needs of a community.

Although there are a number of emergencies and disasters that may impact communities within the OBAC region the most common include hazardous materials spills, flooding, wildfires, severe weather (such as snowstorms), and industrial accidents. Communities also plan for events such as pandemic influenza, earthquakes, airplane crashes, avalanches, critical infrastructure failures, and civil disturbances.

The four areas of emergency management are often delivered by a team of individuals who plan for, and respond to, any emergency or disaster that impacts a community. Typically a local government or First Nation will appoint an Emergency Program Coordinator (EPC), Emergency Social Services Director (ESSD), and an Emergency Management Committee (EMC) to ensure that the responsibilities of the Council and Board area met.



The EPC is responsible for the overall management and coordination of the local EMP while the ESSD is responsible for the management of the volunteers that provide for the essential needs of individuals or families that have been displaced from their homes as a result of an emergency or disaster.

The Emergency Management (or Planning) Committee (EMC) is responsible for: assisting councils and/or boards developing and reviewing emergency plans; identifying and participating in training and exercises; identifying and implementing mitigation projects; evaluating the effectiveness of the programs; and developing program budgets.

Typically, the EMC is comprised of, or works with, the following individuals or agencies:

- Emergency Program Coordinators;
- Mayor and/or council representative, or
  - Chief and/or council representative, or
  - Board chair and/or rural director;
- RCMP representative;
- Fire chief;
- Chief administrative officer;
- Municipal, regional or First Nations department heads;
- Emergency social services director;
- BC Ambulance representative;
- Northern Health representative;
- Ministry of Forests and Range (Wildfire Management Branch) representative;
- Road Maintenance Contractor representative (where applicable);
- Search and Rescue representative;
- Utility providers (i.e., natural gas, telephone, electricity);
- Industry representative;
- Business representative;
- School District representative;
- Media representative;
- Service club representative (i.e., Rotary Club, Kinsmen); and
- Others that the program feels are necessary.



Regional districts may also choose to have an additional committee as part of its emergency program structure. An Emergency Executive Committee (EEC) can be created to work alongside the regional board in managing the region's emergency program. This committee is often comprised of the chair, vice-chair, appointed rural directors, and key regional district staff. Others may assist with specific initiatives.

Local communities fund their emergency program through a combination of taxation, grant funds, corporate donations, and volunteerism. Provincial and federal grant programs have benefited local programs immensely and are often the reason that local emergency management programs have advanced. The former Union of BC Municipalities (UBCM) Emergency Planning Grant funds was instrumental in helping regional districts establish programs and assisted existing programs in advancing and improving their existing capabilities.

Existing funding programs that support local emergency management programs include:

- Joint Emergency Preparedness Program – for plan development, training, EOC and specialized equipment;
- Community Development Trust Job Opportunity Program –for fuel mitigation projects;
- Natural Resources Canada – for fuel management projects;
- UBCM Wildfire Management Planning Program—for fuel management projects;
- Provincial/Federal Flood Protection Program; and
- Direct Access Gaming Grants – for miscellaneous projects with partnering associations or societies.

### 3.3 Method for Developing Recommendations

This Regional Emergency Management Project and the recommendations were completed using a four-step process.

1. Assessment phase that included a review of existing emergency management documents, plans and procedures and projects across the region and a series of interviews with emergency management practitioners;
2. Discussion paper phase that included the development of a discussion paper with a preliminary set of proposed recommendations and action items;
3. Review of this discussion paper with proposed recommendations and action items by emergency management practitioners; and
4. Review of the revised discussion paper by emergency managers and completion of this final document.

In the assessment phase, a review of local successes, challenges, and unmet needs was conducted through interviewing representatives of local emergency management programs and, in some cases, reviewing existing emergency plans. The intent of this phase was not to assess a communities' specific status, but rather to identify areas where neighboring communities could fulfill needs or seize opportunities through inter-community and cross-regional collaboration.



Discussions were held with a number of senior government agencies, including the MOE, MOFR, MAL, and FNESS to determine the relationship and gaps between programs at a federal, provincial, regional, and local level. Although not directly participating in OBAC, a number of First Nations communities and emergency practitioners contributed to the document.

A summary of the findings from the assessment phase were presented with a preliminary set of recommendations and actions as a discussion paper. Follow-up with people at local emergency programs and local and provincial emergency response agencies provided further information and direction for specific recommendations. Federal and provincial legislation and regulations, and local emergency plans and programs were researched on the Internet.

The final discussion paper was circulated to representatives that provided input. Feedback was provided via email and telephone. The feedback strengthened the recommendations and actions.

Recommendations and actions are presented to employ resources to their fullest potential, to identify any needs for additional efforts or resources, and to suggest solutions to the unique regional challenges by presenting opportunities for inter-community and cross-regional collaboration.

## 4.0 CHALLENGES AND OPPORTUNITIES

### 4.1 Challenges

Given the broad range of emergency management responsibilities that local governments are mandated with, communities within the OBAC region have done exceptionally well using their limited resources to their maximum potential. Communities do face challenges though, and have unmet needs within their respective emergency management programs. Some of these could be addressed through collaboration across neighboring communities and/or with senior levels of government.

Many of the challenges that small communities and local governments face are similar in nature. Volunteer recruitment and retention in key program areas such as Emergency Social Services, Emergency Radio Communication, and Emergency Program coordinators is a challenge. Funding is also a concern as communities often have limited budgets and rely upon the funding programs, such as the former UBCM Emergency Planning Grant and the ongoing Joint Emergency Preparedness Program. Funds are need to purchase specialized equipment, improve Emergency Operating Centres, and access training and exercises. In many cases, communities have emergency plans in place but lack the necessary resources to implement their programs to their full potential.

The region's First Nations are working hard to prepare plans for their communities and face similar challenges in doing so: funding; volunteer recruitment and retention; and limited capacity to deal with medium and large scale disasters. FNESS supports emergency planning for First Nations in the province but face uncertain budgets, expertise, and resources to provide the program on an ongoing basis.

## 4.2 Opportunities

In a number of cases, the unmet needs identified could be addressed by sharing resources and seeking collaboration between communities and across the region. With focused funding for cross-community and regional initiatives, communities could enhance their use of existing resources and advance their capabilities to support emergency management activities.



A number of communities have emergency plans in place and work in conjunction with neighboring communities. All communities within the region have informal agreements with neighboring communities that will be implemented should help be required. This can be attributed to the community-oriented approach of the region's residents and government administrations.

In some cases neighboring communities have chosen to formalize their working relationships by entering into mutual aid and program integration agreements. There are several communities throughout the province that have successfully implemented agreements formalizing their collaborative working relationships. While it is unlikely that these existing agreements can be replicated to fit the needs of every community within the region, these agreements do contain elements that can be adapted to suit the unique needs and circumstances of each community.

## 5.0 Recommendations and Actions

The overall goal of this project is to suggest ways that OBAC communities can strengthen emergency management and personal preparedness in the region by using a collaborative approach that addresses both local and regional level emergencies and takes full advantage of available synergies and economies of scale.

Five recommendations and associated actions have been developed to help achieve this goal and are presented below.

These recommendations and action items have been identified to use resources to their fullest potential and to find solutions to the unique challenges of the region. All of the recommendations are intended to find economic and operational efficiencies by promoting cross-regional and inter-community collaboration.

It is noted that many of the recommendations and actions discussed below are focused on planning gaps that have been identified through the assessment phase of this project. As such, *the recommendations and actions are not intended to create additional burdens on local and First Nations governments and community level management programs or professionals*. The ideas presented here aim to identify areas where mutual support, collaboration, and in some cases additional support, could make improvements by creating operational and economic efficiencies and increase the overall level of preparedness and response.

In many cases the actions proposed could be implemented using existing resources. However additional resources may be needed to implement the proposed actions and ensure local governments and programs are not unduly burdened.

A reference table of these recommendations and actions are presented in Section 6. A short description of the item, a list of the primary and supporting agencies or governments that are responsible for implementation as well as a time line are included for each action item. The timeline is based on the following periods for implementation.

- Short-term                      less than 1 year
- Medium-term                    2 to 5 years
- Long-term                        5+ years

## Recommendation 1 Facilitate inter-community and regional planning and response where it will provide efficiencies and increase overall emergency preparedness.

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The following actions identify specific areas where communities and local emergency response agencies and senior governments can collaborate to increase the overall level of capacity to deal with emergencies or disasters on a local and regional scale.

### a. Implement the BCERMS model in all local government and First Nation emergency plans.

The *Emergency Program Act* (EPA) requires that all local authorities (regional districts and municipalities) have emergency plans in place and that they are tested regularly. Although not legislated to do so, local authorities and First Nations are encouraged to write their plans in compliance with the BC Emergency Response Management System (BCERMS). The BCERMS model provides an all-hazards approach to emergency planning and response and ensures that all agencies with responsibilities within the plan, or those agencies that support the plan, utilize a common structure and language.



Consistent use of the model ensures a common operational structure between all levels of response – i.e., the site(s), the Emergency Operations Centre and the Provincial Regional Emergency Operations Centre. Utilization of the system also ensures that staff that is trained in BCERMS can be shared among communities, regions and the province because they are fluent in the functions and roles contained within the model.

Most local governments and First Nations that have chosen to develop emergency management programs have implemented this model and have written their emergency plans based on BCERMS. To ensure interoperability between communities, ministries, and agencies, and ease of staff resource sharing, use of common language and reporting structure based on this model is recommended for all emergency plans being written or updated.

While the task of developing a BCERMS plan may appear daunting, there are a number of agencies that may assist in developing emergency plans. Most emergency plans are based on the BCERMS model and copies can be requested and shared among communities. The BCERMS guidelines can be downloaded from the PEP web site. PEP and the FNESS have experts that can also assist communities in development of emergency plans. The JIBC also offers a Planning Process Course that provides an overview of how to write a BCERMS based plan.

### b. Develop pandemic response plans for communities.

Recent influenza outbreaks across the world have placed a greater emphasis on communities to develop pandemic influenza plans to lessen the impacts of an outbreak.

Under the *Emergency Program Act* local governments have a responsibility to ensure that policies are in place for the provision of business continuity and essential services. Health Authorities and a number of provincial and federal government ministries and agencies have the overall responsibility for managing the health impacts of a pandemic.

Due to the severity of pandemic influenza outbreaks and the potential drain such an event would have to health and essential service staff and resources, communities and Northern Health (NH) must work together to ensure that the health care and essential service needs are adequately met.

Local governments and First Nations must understand their roles during a pandemic and must collaborate in the planning process to ensure that issues regarding cost reimbursement for health-continuity and support services are addressed.

Communities that provide day-to-day service to rural and First Nation communities must be aware of the increased pressures they may face during a pandemic. For example, smaller and/or remote municipal, rural, and First Nation residents may put additional pressure for “service centre” communities to manage traffic, food and supplies and implement security measures. As such, collaborative planning needs to occur between local governments, First Nation communities, NH, local health care providers, and PEP to develop pandemic plans that can be easily implemented.

**c. Develop evacuation plan for all OBAC communities.**

Although most emergency plans include general policies regarding evacuation, it is helpful to for local authorities and First Nations to develop evacuation plans, to help guide evacuation efforts when required. Evacuation plans should include a clear description of how and when an evacuation can be ordered, and include supporting material such as template evacuation alerts, orders and rescinds, and public information releases.

Evacuation plans may include maps that divide the community into sectors by geographical location, identify evacuation routes for evacuees and emergency access and egress. Policies regarding how the public will be notified, who will conduct security, procurement of emergency resources, as well as an outline of the roles and responsibilities of site and EOC personnel can also be included in the evacuation plan.

In developing evacuation plans, communities need to collaborate to address where evacuees may be relocated in another jurisdiction. For example, Mackenzie has identified and confirmed Chetwynd and Dawson Creek as host communities if all or parts of Mackenzie need to be evacuated. This type of discussion needs to take place to ensure host communities have been identified to support their neighbors when required.

**d. Ensure livestock evacuation plans are developed.**



Although livestock producers have a responsibility to develop and implement evacuation plans for their own animals, it is important that local governments work with local producers and groups (such as local cattle associations) and MAL to ensure that livestock needs are addressed.

If not properly planned, local governments will be requested to assist with the transport, food and water for livestock. This may create additional resourcing issues (i.e., the EOC having to set policies for the use of transportation modes) that otherwise would not occur with proper planning.

Additional resources may be required at a provincial level to support MALs continuous and dedicated participation in livestock planning at a local level.

**e. Develop public information plans for all OBAC communities.**

As per the *Emergency Program Act*, a local authority has the responsibility to determine how it will notify the public of an impending emergency or disaster. Most emergency plans have general policies in place that outline how this may occur but it is very helpful to develop a public information plan to guide information activities of the EOC during an emergency or disaster.

Public information plans should outline the methods in which a community will use to notify the public (i.e., newspapers, radio, daily coffee shop flyers, web site) as well as template media releases and public information bulletins. Plans should also identify any short-falls with communication methods. For example, during a power failure, most radio transmission towers do not work because they do not have back-up power. Therefore, other means of communication must be used to disseminate to information to the public.

**f. Ensure that business continuity plans are in place for business, industry, schools, health care providers, emergency response agencies, local governments and First Nations administrations.**

Business continuity planning helps organizations, businesses or industries determine how it will provide essential services to the people it serves when an emergency or disasters occur. Developing and implementing a business continuity plan can decrease costs associated with an emergency as services may not entirely halt because of the emergency (or data is backed-up and available at remote locations, for example).

Business continuity planning is especially important for local governments and First Nations, health service providers, and essential emergency services (i.e., fire, police, ambulance) as the public typically expects continuity of these services, despite minor or major interruptions to these services. Ensuring all public and private community services can continue to function is key to community recovery.

**g. Establish Level 1 Emergency Social Services (ESS) services for each municipal, rural, and First Nation community.**

Local governments are required under the *Emergency Program Act* to provide food, clothing, lodging and transportation for individuals and families who are displaced from their homes as a result of an emergency or disaster. The ESS Program is provincially supported program to provide for these basic needs and has been adopted by most communities as a way of meeting their legislative responsibility.

Most local governments have a basic form of, or access to, ESS services. This basic level is commonly referred to as “Level 1 ESS” (formerly known as Personal Disaster Assistance). This level of ESS response involves ten or less people and typically would be activated for a house fire or a localized flood involving one or two homes.

Because of its nature and ability to provide for an evacuee’s basic needs when there is no other way for these needs to be met, OBAC communities should have access to, or the ability to provide, this service for residents. This can be done by each individual community by establishing a team of four to six people who are trained in ESS Level 1 or by partnering with existing municipal and/or regional district teams.



In an effort to cover this basic requirement, communities that do not have ESS capacity may work collectively with a neighboring community or First Nation to provide this service, where feasible. The Cariboo Regional District is currently investigating development of a system in which all local governments and First Nations within its boundaries work collaboratively in providing ESS services. Alternatively, communities may wish to establish independent programs, such as the Regional District of Fraser-Fort George has done, wherein there is a group of trained volunteers who respond to rural events and assist neighboring municipalities when requested.

The province provides extensive support to local governments and First Nations in establishing and operating an ESS team. The costs of administering an ESS program (i.e., recruiting and retaining volunteers, filing paper work) are borne by the community. However, all costs of an evacuee’s food, clothing, shelter, as well as the volunteer’s expenses (such as mileage and meals) are covered by the province. There are also a number of online training courses offered through the JIBC and Public Health Canada that can be taken by volunteers and staff at no charge. The Emergency Social Services Association also provides regional training opportunities for local volunteers.

**h. Establish a regional ESS structure to ensure that all communities have the ability to quickly activate a Level 2 and 3 ESS response.**

Level 2 and 3 ESS responses include activation of a Reception Centre (where evacuees register and are interviewed to determine their immediate needs and obtain referrals to acquire supplies). Level 3 ESS responses include activation of Reception Centres and Group Lodging Facilities (congregate care facilities for evacuees). Communities that have existing ESS teams typically have the ability to establish reception centres and provide group lodging facilities. This type of service is not available in each and every community within the OBAC region but is something that each community should, at the very least, have reasonable access to.

Communities that lack this capacity, or require additional support can request assistance from neighboring communities or from an ESS Mobile Support Team (MST). Given the mobilization time of an MST (24-48 hours), it is important for all communities to have the capacity to (at the very least) begin providing the services, even if at a limited level. Therefore, it is beneficial for communities to establish agreements or joint ESS programs to ensure that every community within the OBAC region has access to Level 2 to 3 ESS response capabilities. MST would then be used to augment ESS services as required. This could be established via mutual aid agreement between communities and existing teams or by establishing joint or integrated ESS programs between communities and/or regional districts that would facilitate the sharing of ESS resources.

**i. Assess the need for, and advantages of, integrating emergency management programs.**

There are a number of municipalities, regional districts, and First Nations that have chosen to formally integrate their emergency programs as a way of meeting legislative requirements, finding cost efficiencies, sharing resources, and creating an advanced level of capability to respond to and manage emergencies and disasters. Communities that have chosen to implement integrated, or joint, programs find that it is much more efficient to work together, as individual programs were often times achieving the same goals and objectives and competing for the same resources and funds.

Many integrated programs are managed by a regional district and involve formal agreements between all participating parties, including those established by the Columbia Shuswap Regional District and Thompson Nicola Regional Districts. The agreements typically outline how much each party will contribute in funds to the service and how integration is completed in the preparedness, response, recovery and mitigation phases.



A great example of an established integrated program is the Cowichan Emergency Program where each municipality and participating First Nation contributes funds and trained staff to a program that is managed by the Cowichan Valley Regional District. All partners in the program share a BCERMS-based emergency plan that is updated and maintained on a regular basis.

Each municipality within the model maintains its own Emergency Operations Centre for response purposes but coordination activities can be transferred to the Regional District's Emergency Coordination Centre in Duncan when required. Municipal and First Nations Administrators participate in committee that meets several times a year to ensure that each community's needs are being met and that economic and operational efficiencies continue to be made.

All aspects of emergency management are integrated and implemented as one program, as opposed to many programs attempting to meet the same objectives. Training and exercises are held jointly and mitigation efforts are also identified and implemented jointly. Emergency support programs, such as Emergency Social Services and Emergency Radio Communications programs are managed and administered through the Regional District office.

To assist with planning and implementation of projects, a joint emergency management committee is established with representatives from all of the participating communities and emergency response organizations. The committee assists in creating, reviewing and identifying projects and initiatives that ensure everyone's ability to respond to, and coordinate, an emergency or disaster.

Joint or integrated program models may also involve a municipality or First Nation taking on the emergency management program, as opposed to other models where the regional district provides the service. This is a model that the District of Fort St. James and Nak'azdli Band chose to implement to their individual needs. This type of model may be a good starting point for communities who wish to take a small step toward emergency management program integration.

There is not a consistent model of integration for programs within the province. This is because of the broad needs of each community. However, there are components of each established integrated program that can be adapted to meet the needs of OBAC communities. As such, a review of existing integrated emergency programs would be beneficial to determine appropriate model(s).

## **Recommendation 2 Provide additional resources, policy direction, and information to local governments and First Nations where this is needed to improve their capacity and preparedness.**

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In order to advance existing emergency management programs and ensure that there is a common level of response capability across the region, a number of additional resources, policies, and information are required. Implementation of the following action items will help to ensure that public safety needs are met.

### **a. Develop and disseminate comprehensive flood information for communities to use during flood planning and response.**

When responding to floods a number of tools, such as weather forecasts, river discharge information, and stream flow advisories become invaluable tools to guide response and development of policies.

Since the floods in 2007, Environment Canada has converted many of its hydrometric data stations from manual-read water stations to electronic real-time data. This information is especially helpful during flood season as current and historical discharge information can be obtained through Environment Canada's Public Water Survey web site and the MOE River Forecast Center web site. Snowpack information is also available through MOE.



Despite an incredible amount of information, there is still a need for a comprehensive guide that can be used by each community that provides historical flood information, normal and high river flow or lake levels, and triggers to assist a community in determining when a lake or river level will pose a threat. This would be especially helpful for communities to determine the levels in which they should activate flood preparation and/or response plans.

In order to provide this information to each community it would be necessary to gather all historical water information (including local knowledge and verbal history), install additional snow pillows, hydrometric data stations, and years of study and analysis. Information sessions may also be required to teach communities how to use the statistical information for flood planning and response purposes.

### **b. Finalize the fire response model and present to local governments and First Nations as a planning and response tool.**

In 2007 the MOFR, Wildfire Management Branch (formerly the Protection Program) began developing a Fire Prioritization model to help Fire Centre staff determine what fires to fight, based on assigned and requested resources and landscape values. The model incorporates values such as mixed development (homes), highway right-of-way, hydro lines, provincial and national parks, wildlife values, and timber supply areas.

This model is of value to local governments and First Nations in determining how to use and allocate its own resources during fire response. Communities should be aware of the framework, the values contained within it and how it works so that they are able to appropriately plan and respond to fires threatening or within their communities.

This framework is currently being modified by the MOFR and should be implemented for the 2010/11 fire season. Through the modification and implementation stages, local governments should be introduced to the model and its values to use as a planning and response tool for interface fires.

### **c. Strategically place efficient sandbagging equipment across the region for quick deployment to areas at risk due to flooding.**

If spring freshet flooding is imminent, PEP will provide sandbags to local governments and First Nations for use during flooding. PEP also provides additional sandbags, as required, during flood events. PEP owns two sandbagging machines, one stored in Terrace and one in Prince George, that are available to OBAC communities when mass sandbagging efforts are required. The machines, however, require heavy equipment and a conveyor belt to operate. They are also time consuming to set up and are often difficult to run effectively and results in additional costs because of the required machinery.

There are other sandbagging machines that are less labor-intensive, less expensive and easily-deployed that some communities (such as Fort St. James) have purchased. It would be beneficial for these types of sandbaggers to be strategically located throughout the OBAC region for deployment during flood events.

**d. Purchase and locate a Sprinkler Protection Unit (SPU) for the OBAC region for use during fire seasons.**

In 2004, UBCM purchased three SPUs to be deployed to areas exposed to an immediate interface fire risk. The units cost approximately \$140,000 each and are designed to protect 30-35 homes. The units have been deployed several times since their purchase and have been credited for saving many homes.

The units are kept in Chilliwack during the off season and deployed to high risk areas by requests to the Office of the Fire Commissioner (OFC). Currently one SPU has been located in Prince George in anticipation this year's fire season. However, this unit could be redeployed to another area of the province, as required. Alternatively, the other two units could be deployed to communities within the OBAC region should additional structural protection be required.

Given their success and the relative risk of wildfire, it would be beneficial for an additional SPU to be purchased and located within the OBAC region. Once purchased, the unit could be included within the existing SPU stockpile and follow the existing deployment criteria.

**e. Establish an Emergency Social Services (ESS) Mobile Support Team (MST) that is based in the northwest area of the province.**



Level 2 and 3 ESS responses are used to support the evacuation during large scale emergencies involving several homes, multi-family dwellings, neighborhoods or even entire communities. Level 2 responses include activation of a Reception Centre. Level 3 ESS responses include activation of Reception Centres and Group Lodging Facilities. Communities with existing ESS teams typically have the ability to establish basic reception centres and sometimes provide group lodging facilities. However, this type of service is not available in each and every community within the OBAC region.

When this type of service is required and a community is unable respond on its own, they may request assistance from neighboring communities or from an ESS MST. There are five MST within the province; one of which is based primarily out of the northeast area of the province, but managed from Victoria. These teams, depending on the location of the request, usually take 24-48 hours to mobilize and arrive in the requested community.

The MST that is based in the northeast is primarily responsible for responding to any ESS activations, to the entire northern area of the province. Given the vast geography, travel distances, and frequency of emergencies requiring ESS support, it would be helpful to establish an additional MST that is based out of the northwest.

**f. Develop an enabling policy that provides guidance to local government and First Nations who wish to integrate emergency management programs.**

A hindrance to further developing integrated emergency programs within the region is the lack of policy that addresses resourcing issues in the planning and response phases of emergency management. For example, not all communities that wish to enter into integrated emergency programs, can bring equal physical, human, and cash resources to the table as its potential partners. In some cases, communities have conducted emergency management activities for its neighbor with no means of recovering the costs of lost staff time (with the exception of overtime) through the provincial government.

**g. Implement additional funding programs to assist local governments and First Nations with program administration, plan development and capital expenditures.**

Currently, there is only one funding program for emergency management projects that can be accessed by local governments and First Nations. The Joint Emergency Preparedness Program (JEPP) is federal funding program that supports training and education, emergency exercises, development of emergency plans, telecommunication projects, minor modifications and equipping EOCs and specialized vehicles and equipment. The program does not cover ongoing maintenance or fees associated with the equipment. JEPP will cover up to 50% of the project's eligible costs, however, for some communities, even 50% of a project's costs are unaffordable.

Some communities have been able to leverage funding through direct-access gaming grants by partnering with local societies (such as Search and Rescue or a Fire Department's association), that have similar needs and interests. This may be an option for communities that can find common needs and put together a successful application to the Gaming Authority.

As with most local government and First Nations programs there is an enormous need for additional funding to help support emergency management programs. Funds would be well used by each community in the areas of program administration (staffing and office costs), capital expenditures for EOCs, and emergency equipment as well as planning processes for evacuation and pandemic planning. Funds would also be beneficial to ensure communities are able to participate in training and conduct exercises to practice the policies and procedures contained in local emergency plans.



**Recommendation 3 Improve training, recruitment, and retention of emergency staff and volunteers by creating synergies at the inter-community and regional levels.**

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Most communities within the OBAC region face similar challenges related to engaging staff and volunteers in training and exercises as well as maintaining adequate levels of volunteers. The following recommendations are intended to assist communities in meeting those needs by implementing opportunities for collaboration between communities and across the region.

**a. Secure funding to ensure that communities have access to sponsored Emergency Management and Emergency Social Services training.**

Training and exercises are integral to successful emergency management programs. Training programs, such as emergency plan orientations and self-study or classroom courses, provide those with roles and responsibilities within a community's emergency management program an opportunity practice and develop their skills. Exercises (drill, discussion-based, tabletop, functional and full-scale) provide an opportunity for individuals to practice their roles and for the community to review the policies and procedures contained within. Maintaining a training and exercise program is a requirement of local governments under the *Emergency Program Act*.

Currently, emergency management and Emergency Social Services courses are being sponsored by the BC Association of Emergency Managers and the Emergency Social Services Association, respectively, through direct access gaming grants. While this is an excellent opportunity to address many of the issues and concerns regarding training delivery in BC, the funds have only been approved for this fiscal year (2009/2010). There is no commitment from the Gaming Authority for subsequent funding. The future of sponsored training is, therefore, uncertain.

In order to ensure that communities continue to have access to training it is crucial that funding commitments are obtained.

- b. **With support from the province, ensure all local responding agencies (fire, police, ambulance, search and rescue, and public works) are trained in hazardous materials awareness.**

All industries in the province are required to have emergency plans in place to deal with the hazards that may affect their workers and the community. In most cases, the spiller, (i.e., rail or fuel company) has the responsibility to manage environmental damage and pay any response costs incurred by the local government or First Nation community.



Local governments, through their responsibilities under the *Emergency Program Act*, have a responsibility to provide basic service needs to evacuees (i.e., food, clothing, and lodging) while fire departments, through their operational guidelines, must determine the appropriate level of service it can provide for hazardous materials spills.

In most cases it is simply unrealistic to train and equip a fire department to respond to the technical side of hazardous materials spill. As such, most fire departments have a basic level of training, also known as hazardous materials awareness, so that the department, while responding to any type of call, can identify the material(s) that has spilled, determine the appropriate geographical area for an evacuation area and provides perimeter control services until a specialist, provided from the spiller, private contractor or the MOE, arrives to conduct response and clean up efforts.

Not all hazardous materials spills involve industrial or transportation-related spills. Flooding can cause significant environmental damage as contaminants, such as gasoline and household cleaners, can spill into lakes and rivers. Because of the broad scope of hazardous materials spills, it is important for every responding agency to have a basic understanding of hazardous materials so that they can ensure responder and public safety is upheld.

- c. **Provide Sprinkler Protection Unit (SPU) training to all fire departments within the OBAC region.**

The Office of the Fire Commissioner provides training on the SPU so that fire departments can assist with their installation when required. Currently, it is not known if any communities within the OBAC region have received SPU training. In preparation for subsequent fire seasons it would be advantageous for all communities to receive this training, perhaps on a rotational basis, or according to seasonal risks.

- d. **MOE to conduct hazardous materials exercises with Environmental Emergency Response Officers and Incident Management Teams, local first responders, spill response/clean up contractors and Emergency Operations Centres.**

The province provides support to hazardous materials spills by supporting communities and road rescue teams through PEP and through the MOE Environmental Emergency Management Program. The program's main objective is to ensure that proper clean up and containment takes place during hazardous materials spills. The Ministry deploys Environmental Emergency Response Officers, Incident Management Teams, when required (i.e., the Queen of the North sinking), and private hazardous materials contractors to assist with environmental cleanup.

MOE has conducted exercises with communities and the site responders to practice roles and responsibilities during a hazardous materials spill. More of this type of training would be beneficial in further advancing a community's ability to deal with, and coordinate response to, a hazardous materials spill.

- e. **With the support of the province, conduct regional exercises to practice implementation of emergency plans.**

Most municipalities and local governments within the OBAC region conduct some form of training once a year. The most common form is a discussion based exercise wherein members of the Emergency Management Committee will discuss a response to a seasonal threat, such as a wildfire or flood. Communities also participate in tabletop exercises wherein the EOC is activated and a series of inputs are given to participants. In most cases invitations to neighboring communities, the regional district and outside agencies are extended as an opportunity for observations or participation.

Although they involve a large amount of planning, functional exercises are an excellent way to test both the ability of site personnel to respond to an emergency or disaster as well as the ability of the EOC to provide support. Specifically, functional exercises test the inter-operability of first responders at the site (i.e., how do the fire department, ambulance, police and public works work together) as well as the communication links between the site and the EOC. Including an EOC component to the functional exercise also helps test the policies and procedures included in the emergency plan as well as the functionality of the EOC.

The Bulkley-Nechako Interface Committee began discussions in 2006 to develop a functional exercise that tested the ability of local fire departments and the Wildfire Management Branch to work together on an interface fire. Although this exercise did not materialize, organizing a similar exercise would be an extremely helpful initiative to help identify successes and challenges when responding to a regional emergency that involves a number of different local governments, First Nations, provincial, and federal agencies.

This type of exercise could be expanded to include both regional districts and the communities within. It is likely that communities could work together to plan such an exercise without requiring a large number of additional resources. Collaboration in areas like developing emergency exercises is an excellent example of efficiencies that can be reached through inter-community cooperation.

**f. Develop mentoring programs for Emergency Program Coordinators and Emergency Social Services Directors.**

Nearly all communities within the OBAC region have indicated challenges regarding volunteer recruitment and retention in all aspects of their Emergency management Programs. Specifically, communities face challenges when recruiting individuals to take on the role of an Emergency Program Coordinator or ESS Director.

Communities that face this challenge have indicated that having a mentoring program for Emergency Management personnel would be an advantage when requesting that an individual(s) take on the role of a coordinator or director. A mentoring program would connect individuals new to the field to experienced individual(s) to assist them in identifying program needs and implementing initiatives. This could be done between communities, regions or through professional associations, such as the Emergency Social Services Association or BC Association of Emergency Managers. A program of this nature would be of benefit to both volunteer and paid staff.

**g. Create a volunteer recruitment and retention program handbook for emergency management programs that can be implemented in local emergency management programs.**

The challenges faced by communities seeking emergency management program and ESS volunteers are not unique to northern BC or the emergency management field. Over the last several decades volunteerism has changed dramatically. Individuals and families are much busier and indicate that they do not have the time to volunteer due to other commitments. Statistics indicate that one in three Canadians volunteer, however, less than ten percent of those volunteers do three-quarters of the work of the organization. Young people are seeking roles in volunteer organizations to improve their resumes and seniors are volunteering less because of vacations. They indicate that they are already volunteering with many other organizations.



Organizations that rely on volunteers must change the way they conduct recruitment and retention initiatives. For example, individuals are more likely to volunteer for short-term, task-oriented projects rather than signing up to do a wide range of tasks. Some volunteers are only willing to commit time for a specific time period or to gain valuable job skills.

There are numerous resources available to assist communities in restructuring their volunteer programs. It would be of benefit to communities within the OBAC region for a handbook to be developed that breaks down program components and develops implementable strategies for recruiting and retaining volunteers in all aspects of the local emergency management program.

## Recommendation 4 Take steps to mitigate the impacts of future threats.

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Taking steps to minimize the potential threat or impact of an emergency or disaster is an invaluable way of increasing and maintaining public safety. The following action items are intended to identify areas in which communities require additional support or where further collaboration between senior and local governments and First Nations communities can strengthen emergency preparedness at a regional level.

**a. Implement programs that allow communities to access operational funds to assist with ongoing inspection and maintenance of flood control measures.**



In 2007 the provincial and federal government reintroduced the flood protection program. The governments committed \$100 million dollars for ten years, beginning in 2007, for local governments to conduct flood protection works. Eligible projects include major repair and upgrades to existing flood protection works, new flood protection works to protect existing development, engineering design work and surveys, pumps and pump stations and relief wells. Ongoing maintenance and projects that do not lower a community's flood risk are not eligible for funding under this program.

A community's contribution ranges from 10–33% of the total project cost and is dependent up on the community's latest population statistics. The cost of regular maintenance and inspection are not covered and is sometimes a hindrance for a community to implement a flood mitigation project. Local governments and First Nations administrations are therefore required to find funds through taxation or operational budgets to cover these costs, often making project unaffordable. When and where possible, local governments and First Nations should work together to find cost efficiencies for inspections and maintenance. Programs to provide funds to at-risk communities that are unable to afford operational costs should be developed and implemented to ensure that public safety concerns related to flooding are addressed.

**b. Continue to address hydrological issues related to mountain pine beetle through watershed assessments and modified harvesting practices.**

The MPB epidemic and the subsequent increased harvesting policies in the province has caused widespread concern for impacts of local watersheds – specifically the total amount of water flowing out of a watershed, peak flow and changes to historical flood times – as well as increased risk to forest fires.

MOFR recognizes that this issue presents significant risk of hydrological problems. Studies conducted by MOFR suggest that the MPB can cause an increase in water reaching, stored in and flowing from hillsides; an earlier onset of spring snowmelt; an increase in spring and total annual stream flow volumes, changes summer and fall flows; and a more rapid stream flow response to storms.

The magnitude of hydrologic change is variable, and factors include the severity and time since the attack; the presence, density and extent of understory vegetation; the extent of salvage logging within stands and across a watershed; the occurrence of fire; the physical characteristics of the watershed; and weather.

To mitigate the impacts of the MPB infestation on hydrology, foresters have developed a number of recommendations. These include salvage and harvesting initiatives as well as strategies that begin to address the risk to public and private infrastructure and to increase inter-agency and public communication regarding public safety and infrastructure risks.

Because there are so many variables to hydrology it is nearly impossible to determine the exact impacts of the MPB to flood risk. MOFR has implemented recommendations that require a licensee to conduct watershed assessment and to modify harvesting practices accordingly in an effort to decrease hydrological impacts in MPB areas. Experts who are studying the MPB conclude that addressing hydrological impacts at the watershed level through harvesting practices is the most effective way of lowering flood risks.

**c. Develop an application guide for all fuel management funding programs for local governments and First Nations.**

To address the forest fire impacts of the MPB, the provincial and federal governments have entered into partnerships with participating local governments, First Nations and service groups and initiatives, such as

FNESS and the First Nations Mountain Pine Beetle Initiative, to implement fuel management programs as a method of minimizing the risk of wildfire to communities. Most fuel management projects involve a combination of thinning, pruning and removal of trees and other woody debris to decrease the amount of fuel within the forest to prevent wildfires. Available funding covers the planning and implementation processes.

Currently there are a number of funding programs available through UBCM and NRCAN for communities and First Nations to complete Community Wildfire Protection Plans and operational fuel modification projects to decrease interface fire risks to communities. The Provincial Job Opportunities Program, through the Community Development Trust, can also be used to offset the costs of fuel modification projects.

Many communities have been successful using all funding programs to conduct fuel modification projects. In many cases, funding from UBCM can be used to leverage funding from NRCAN and the Trust, and vice versa. As grant application and approval processes are sometimes cumbersome and confusing, developing a handbook for local governments and First Nations that identifies a funding leveraging process and basic step-by-step grant application information would be beneficial.



**d. Ensure transport of hazardous materials rules and regulations are enforced throughout the region.**

In BC, and throughout Canada, the transportation of dangerous goods is strictly regulated under the *Transportation of Dangerous Goods Act* and associated regulation. The Act and its regulation (which have been adopted by the province) establish the regulatory requirements for the handling and transport of dangerous goods via all modes within Canada.

The rules and regulations are enforced by the Commercial Vehicle and Safety Enforcement Branch of the provincial Ministry of Transportation and Infrastructure. The Ministry works collaboratively with Transport Canada to enforce transportation of dangerous goods requirements on roads while Transport Canada addresses all transportation modes and the inter-jurisdictional movement of dangerous goods.

Because the transportation of dangerous goods can pose such a large potential threat to communities within the OBAC region (main transportation arteries move through almost all OBAC communities) it is imperative that adequate provincial and federal resources be allocated to ensure compliance and enforcement with the *Transportation of Dangerous Goods Act* and the *Transportation of Dangerous Goods Regulation*.

**e. Ensure all liability exposures are addressed to ensure volunteers remain fully engaged in emergency response programs.**

Recent developments regarding lawsuits and volunteer response teams have led to wide concern regarding the liabilities to which volunteers in the emergency response field may be exposed. Emergency management programs within the OBAC region would not exist without the support and dedication of volunteers. As such, it is absolutely critical that all liability exposures are addressed to ensure that volunteers remain fully engaged in emergency response programs. Without clear direction and comprehensive coverage volunteers may be reluctant to become part of emergency response teams such as Search and Rescue, Road Rescue and Emergency Social Services.

**f. Encourage cooperation between all communities, government agencies and crown land users to address wildfire risks throughout the OBAC region.**

When fuel modification projects are implemented, they often involve and impact a number of different jurisdictions. In most cases, communities use a 2 km radius around an at-risk area to define the boundary of the project. In some cases this means that projects that are done to protect a community require activities outside of its jurisdictional boundary.

Most municipalities have done well in addressing fire risks due to their relatively small geographical areas, as compared to the vast areas covered by regional districts. Regional districts also have immense areas of Crown land in which overlapping jurisdictions, licensees, and land uses are involved. Without cooperation between all communities, government agencies, and land users wildfire risks within rural areas will be difficult to address. Communities should work together to avoid duplication in planning and implementation and to find cost efficiencies in program administration and implementation.

## **Recommendation 5 Develop local emergency preparedness awareness and education programs to ensure that OBAC residents are prepared for emergencies and disasters.**

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As emergency management relies on the concept of shared responsibility, it is important that local and senior governments, First Nations and the public work together to educate and ensure public preparedness. As such, the following action items identify initiatives that can be taken at a local and regional scale that will increase the overall level of individual and family preparedness.

### **a. Determine the level of preparedness of individuals and families within the OBAC region and monitor over the long term.**

A recent survey conducted by the All State Insurance company indicated that 86% of Canadians feel that it is important to be prepared for potential emergencies, however only 58% of Canadians feel that they are prepared. This means that nearly half of the Canadian population is unprepared and will be seeking assistance from their community when an emergency or disaster occurs.



There are differing opinions regarding public preparedness in northern communities. Despite the idea that Northern residents do not need to rely on government as much to ensure that their basic needs during an emergency are met, the 2006 snowstorm identified some obvious short falls for individual and family preparedness. For example, most individuals and families were not able to listen to the radio for information because they did not have battery operated radios nor were they able to use the landline telephone system because their telephones were cordless and required power to operate. Some families have also converted their main source of heat to one that required electricity to run fans on pellet or wood stoves or they simply relied on electric heat. Conversely, responders found that individuals who had heat and communication means were very willing to help out their fellow neighbor which decreased the demand on local government emergency resources.

It would be helpful to determine the level of preparedness of OBAC residents and identify gaps in personal preparedness. From there, emergency management programs can develop educational programs to assist northern individuals and families to becoming more prepared for emergencies or disasters.

### **b. Develop an emergency preparedness school curriculum that can be used by teachers and emergency managers for delivery in schools.**

Public education programs, such as Smokey Bear (forest fires) and Sparky (house fires) have a lasting impressions for children who participate in this type emergency preparedness programs. There are a number of international, federal, and provincial programs that can be used by local government and First Nation emergency preparedness programs to teach personal preparedness to school-aged children.

PEP has developed earthquake, tsunami and outdoor preparedness programs that can be taught by practitioners and teachers in schools, however there is no curriculum for general emergency preparedness, flooding, forest fires and other hazards common to the north that can be easily implemented in schools. The Cowichan Valley Regional District created an Emergency Preparedness Workbook which is an excellent tool for residents to help prepare for an emergency or disaster. It could be adapted to meet northern preparedness challenges and as a starting point to develop an emergency preparedness school curriculum.

### **c. Investigate the use of neighborhood preparedness programs as a means of increasing public preparedness for emergencies and disasters within the OBAC region.**

A preparedness program has been developed by the province and the Justice Institute of BC that provides tools to local emergency management programs to encourage neighborhoods to work together to become more prepared and to have an organized system of neighborhood response during an emergency or disaster. The program offers a train-the-trainer course so that the participant can go back to his or her community and implement the program. There may need to be a review of the program to ensure its applicability to northern communities, however, the concept of neighborhood preparedness is worth further investigation.

## 6.0 Recommendations and Actions

*Recommendation 1 Facilitate inter-community and regional planning and response where it will provide efficiencies and increase overall emergency preparedness.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
a. Implement the BCERMS model in all local government and First Nation emergency plans.	<ul style="list-style-type: none"> <li>BCERMS is the provincial standard for emergency management. Implementation of the model ensures communities and government agencies share information and work effectively together during and emergency or disaster.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>Other local governments</li> <li>First Nations</li> <li>FNESS</li> </ul>	Short-term
b. Develop pandemic response plans for communities.	<ul style="list-style-type: none"> <li>Development of pandemic plans will assist in addressing essential service provisions during a pandemic and outline the assistance that can be rendered to local health agencies when required.</li> </ul>	<ul style="list-style-type: none"> <li>NH</li> <li>Local Governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>Health Service Providers</li> <li>FNESS</li> <li>Local and regional emergency management/ planning committees</li> </ul>	Medium-term
c. Develop evacuation plans for all OBAC communities.	<ul style="list-style-type: none"> <li>Evacuation plans ensure that a community has identified how it will move people from areas of harm to safety, how they will be notified and what resources are required to conduct an evacuation, should it be necessary.</li> </ul>	<ul style="list-style-type: none"> <li>Local Governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>RCMP</li> <li>PEP</li> <li>FNESS</li> <li>Local and regional emergency management/ planning committees</li> </ul>	Medium-term
d. Develop livestock evacuation plans.	<ul style="list-style-type: none"> <li>Livestock producers have a responsibility to develop and implement evacuation plans for their own livestock. Ensuring that all producers have plans in place will lessen the requests for assistance from local governments during an emergency or disaster.</li> </ul>	<ul style="list-style-type: none"> <li>Livestock Producers and producer groups</li> <li>MAL</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Medium-term
e. Develop public information plans for all OBAC communities.	<ul style="list-style-type: none"> <li>Local governments and First Nations must be able to warn the public of impending emergencies and disasters and to provide regular updates regarding the status and severity of events. Having plans in place ensures information can be communicated to the public fast and efficiently.</li> </ul>	<ul style="list-style-type: none"> <li>Local Governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> <li>Other local governments</li> <li>First Nations</li> </ul>	Medium-term

*Recommendation 1 Facilitate inter-community and regional planning and response where it will provide efficiencies and increase overall emergency preparedness.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
f. Ensure business continuity plans are in place for business, industry, schools, health care providers, emergency response agencies, local governments and First Nations administrations.	<ul style="list-style-type: none"> <li>Business continuity is essential for community recovery efforts. Ensuring that everyone has a plan in place for ensuring essential services will be provided to a community lessens the overall stress to individuals and communities during, and immediately following, an emergency.</li> </ul>	<ul style="list-style-type: none"> <li>Business</li> <li>Industry</li> <li>Schools</li> <li>Local governments</li> <li>First Nations administration</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> </ul>	Medium-term
g. Establish Level 1 Emergency Social Services (ESS) services are established for each municipality, rural and First Nation community.	<ul style="list-style-type: none"> <li>Communities that have volunteers trained in ESS Level 1 are able to provide for the essential needs (food, clothing, lodging and transportation) of individuals and families who are displaced from their homes as a result of an emergency or disaster (i.e., house fire or small flood).</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> <li>Justice Institute of BC - for training material</li> </ul>	Short-term
h. Establish a regional ESS structure to ensure that all communities have the ability to quickly activate a Level 2 and 3 ESS response.	<ul style="list-style-type: none"> <li>Should a large scale emergency or disaster occur, communities must be able to provide for the essential needs of individuals and families. Ensuring access to Level 2 and 3 ESS will assist local governments in meeting their legislative responsibilities.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> </ul>	Long-term
i. Assess the need for, and advantages of, integrating emergency management programs.	<ul style="list-style-type: none"> <li>Implementing integrated emergency plans will address resourcing issues, improve communication between communities, and reduce the strain on resources when meeting similar goals and objectives.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> <li>Other local governments</li> <li>First Nations with integrated emergency management programs</li> </ul>	Long-term

*Recommendation 2 Provide additional resources, policy direction and information to local governments and First Nations where this is needed to improve their capacity and preparedness.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
a. Develop and disseminate comprehensive flood information for communities to use during flood planning and response.	<ul style="list-style-type: none"> <li>Local governments and First Nations that have access to comprehensive flood information, including historical flood information and triggers for flood response, will be better able to assist the public and manage response to flooding events.</li> </ul>	<ul style="list-style-type: none"> <li>Ministry of Environment</li> <li>Environment Canada</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Long-term
b. Finalize the fire response model and present to local governments and First Nations as a planning and response tool.	<ul style="list-style-type: none"> <li>When completed, the fire response model will be able to assist the Ministry of Forests and Range in determining how and when to respond to fires. Because of the values contained within the model, and the impact it will have to fire management, communities should be introduced to the model for planning and response purposes.</li> </ul>	<ul style="list-style-type: none"> <li>MOFR—WMB</li> </ul>	<ul style="list-style-type: none"> <li>Local governments and First Nations (for information purposes only)</li> </ul>	Short-term
c. Strategically place efficient sandbagging equipment across the region for quick deployment to areas at risk due to flooding.	<ul style="list-style-type: none"> <li>Strategically placing efficient sandbagging equipment (that does not require heavy equipment to operate) will lessen the overall cost of sandbagging and ensure that quick deployment to areas at risk of flooding can take place.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> <li>PEP</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> <li>FNESS</li> <li>PEP</li> </ul>	Short-term
d. Purchase and locate a Sprinkler Protection Unit (SPU) for the OBAC region for use during fire season.	<ul style="list-style-type: none"> <li>Currently there are three (3) SPUs available within the province for deployment to areas at risk during the fire season. It would be prudent to purchase an additional SPU for deployment to communities within the OBAC region during fire season to assist with fire fighting efforts during the summer months.</li> </ul>	<ul style="list-style-type: none"> <li>Union of BC Municipalities (UBCM)</li> <li>Office of the Fire Commissioner (OFC)</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Medium-term
e. Establish an Emergency Social Services Mobile Support Team (MST) that is based in the northwest area of the province.	<ul style="list-style-type: none"> <li>Currently there is one MST that primarily covers the Northern area of the province. Having a team based in the northwest will ensure additional coverage and support to communities that require additional support.</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Medium-term

*Recommendation 2 Provide additional resources, policy direction and information to local governments and First Nations where this is needed to improve their capacity and preparedness.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
f. Develop an enabling policy that provides guidance to local governments and First Nations that wish to integrate emergency management programs.	<ul style="list-style-type: none"> <li>Creating an enabling policy that addresses the barriers to integrating emergency management programs (i.e., the inability for local governments to recoup the costs of lost staff time when assisting another community) would address the hesitancy of local governments and First Nations to enter into partnerships with neighboring communities.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial Emergency Program</li> <li>INAC</li> <li>FNESS</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Medium-term
g. Implement additional funding programs to assist local governments and First Nations with program administration, plan development and capital expenditures.	<ul style="list-style-type: none"> <li>Local governments and First Nations are struggling to find sufficient funding sources to support their emergency management programs. Creation of additional funding programs would assist communities in building on their existing strengths and available resources.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> <li>INAC</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> <li>FNESS</li> <li>UBCM</li> <li>Professional Associations*</li> </ul>	Medium-term

\* Professional Associations may include groups such as the Fire Chiefs' Association of BC, BC Search and Rescue Association, the Emergency Social Services Association, and the BC Association of Emergency Managers.

**Recommendation 3** *Improve training, recruitment and retention of emergency staff and volunteers by creating synergies at the inter-community and regional levels.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
a. Secure funding to ensure that communities have access to sponsored Emergency Management and Emergency Social Services training.	<ul style="list-style-type: none"> <li>Without permanent funding communities will not have access to essential training to ensure staff and volunteers have the knowledge to carry out their roles and responsibilities during emergencies and disasters.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> <li>FNESS</li> <li>Emergency Social Services Association</li> <li>BC Association of Emergency Managers</li> </ul>	Short-term
b. With support from the province, ensure all local responding agencies (fire, police, ambulance, search and rescue, and public works) are trained in hazardous materials awareness.	<ul style="list-style-type: none"> <li>Providing basic hazardous materials training will help ensure the safety of all emergency response personnel and the public.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> </ul>	Medium-term
c. Provide Sprinkler Protection Unit (SPU) training to all fire departments within the OBAC region.	<ul style="list-style-type: none"> <li>Providing SPU training to all fire departments within the OBAC region will ensure that proper set-up and protection of dwellings will take place should the unit(s) need to be utilized by communities.</li> </ul>	<ul style="list-style-type: none"> <li>Office of Fire Commissioner</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> <li>FNESS</li> </ul>	Long-term
d. MOE to conduct hazardous materials exercises with Environmental Emergency Response Officers and Incident Management Teams, local first responders, spill response/clean up contractors and Emergency Operations Centres.	<ul style="list-style-type: none"> <li>As hazardous materials spills pose a significant and increasing threat to local communities, it is imperative that exercises be held with all agencies with responsibilities to respond to spills to ensure everyone's capability to respond and manage environmental emergencies.</li> </ul>	<ul style="list-style-type: none"> <li>MOE</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Medium-term
e. With the support of the province, conduct regional exercises to practice implementation of emergency plans.	<ul style="list-style-type: none"> <li>Exercises of a regional nature (i.e., large scale forest fire or severe weather event) will help communities share information and work together to coordinate response to emergencies and disasters. These exercises will also identify successes and gaps that need to be addressed prior to a real regional emergency occurring.</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>PEP</li> <li>FNESS</li> </ul>	Medium-term

*Recommendation 3 Improve training, recruitment and retention of emergency staff and volunteers by creating synergies at the inter-community and regional levels.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
f. Develop a mentoring program for Emergency Program Coordinators and Emergency Social Services Directors.	<ul style="list-style-type: none"> <li>A mentoring program that links experienced practitioners with those that are new to the emergency management field is a beneficial initiative that would not only provide support to new coordinators and directors, but also serve as an incentive for individuals to volunteer for these positions.</li> </ul>	<ul style="list-style-type: none"> <li>Professional associations*</li> <li>PEP</li> <li>FNESS</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> </ul>	Medium-term
g. Create a volunteer recruitment and retention handbook for emergency management programs that can be implemented in local Emergency Management Programs.	<ul style="list-style-type: none"> <li>Volunteer retention and recruitment is an ongoing challenge for local emergency management programs. A handbook that addresses these issues with suggested action items for implementation is needed by communities within the OBAC region.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> <li>FNESS</li> <li>Professional associations*</li> </ul>	Medium-term

\* Professional Associations may include groups such as the Fire Chiefs' Association of BC, BC Search and Rescue Association, the Emergency Social Services Association, and the BC Association of Emergency Managers.

**Recommendation 4** *Take steps to mitigate the impacts of future threats.*

Specific Actions	Rationale	Primary Responsibility	Additional implementation team members	Timeline
a. Implement programs that allow communities to access operational funds to assist with ongoing inspection and maintenance of flood control measures.	<ul style="list-style-type: none"> <li>Although there are funds available to implement flood control measures, these funding programs do not cover ongoing inspection or maintenance costs. Programs that assist in covering these costs are needed to ensure that the public and private properties are protected from reoccurring flood events..</li> </ul>	<ul style="list-style-type: none"> <li>Provincial and federal governments</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> <li>FNESS</li> <li>UBCM</li> </ul>	Medium-term
b. Continue to address hydrological issues related to mountain pine beetle through watershed assessments and modified harvesting practices.	<ul style="list-style-type: none"> <li>Hydrological issues related to mountain pine beetle are currently being managed by licensees via watershed assessments. This is the most appropriate means of addressing potential hydrological impacts.</li> </ul>	<ul style="list-style-type: none"> <li>MOFR</li> <li>Industry (licensees)</li> </ul>	<ul style="list-style-type: none"> <li>MOE</li> <li>Local governments</li> <li>First Nations</li> </ul>	Ongoing
c. Develop an application guide for all fuel management funding programs for local governments and First Nations.	<ul style="list-style-type: none"> <li>In many cases, programs can be used collectively to leverage additional funding for fuel mitigation projects. Developing a step-by-step guide that explains the grant programs and how they can be used together is necessary to ensure communities obtain the maximum amount of funding available.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial and federal government</li> </ul>	<ul style="list-style-type: none"> <li>MOFR–WMB</li> <li>UBCM</li> <li>NRC</li> <li>Community Development Trust</li> <li>FNESS</li> <li>Local governments</li> <li>First Nations</li> </ul>	Short-term
d. Ensure transport of hazardous materials rules and regulations are enforced throughout the OBAC region.	<ul style="list-style-type: none"> <li>Provincial and federal acts and regulations are in place to ensure that the transport of hazardous materials is done in a safe manner. It is important to ensure compliance and enforcement of these regulations to protect public health and safety.</li> </ul>	<ul style="list-style-type: none"> <li>MOE</li> <li>DOT</li> </ul>	<ul style="list-style-type: none"> <li>Transporters of hazardous materials</li> </ul>	Short-term
e. Ensure all liability exposures are addressed to ensure volunteers remain fully engaged in emergency response programs.	<ul style="list-style-type: none"> <li>Recent exposures to volunteer liability have resulted in many emergency volunteer organizations unclear about the personal and group liabilities that may exist. It is imperative that these liabilities be addressed to ensure volunteers remain active and interested in emergency volunteer programs.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> </ul>	<ul style="list-style-type: none"> <li>Local governments</li> <li>First Nations</li> </ul>	Short-term

**Recommendation 4** *Take steps to mitigate the impacts of future threats.*

Specific Actions	Rationale	Primary Responsibility	Additional implementation team members	Timeline
f. Encourage cooperation between all communities, government agencies and crown land users to address wildfire risks throughout the OBAC region.	<ul style="list-style-type: none"> <li>In order to decrease the risk of wildfires within all communities, local governments, First Nations, government agencies and licensees must work cooperatively in implementation of fuel management programs. Specifically, concerns regarding fuel management practices on crown land must be addressed.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> </ul>	<ul style="list-style-type: none"> <li>Local government</li> <li>First Nations</li> <li>Licensees</li> <li>Crown land users</li> <li>FNESS</li> </ul>	Long-term

**Recommendation 5** *Develop local emergency preparedness awareness and education programs to ensure that OBAC residents are prepared for emergencies and disasters.*

Specific Actions	Rationale	Primary responsibility	Additional implementation team members	Timeline
a. Determine the level of preparedness of individuals and families within the OBAC region and monitor over the long term.	<ul style="list-style-type: none"> <li>Differing opinions regarding public preparedness in Northern communities requires a study to determine the actual level of preparedness and if there are any gaps or unmet needs that can be addressed at the local or regional level.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> <li>Local government</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>UBCM</li> <li>FNESS</li> <li>UNBC and other educational institutions</li> </ul>	Medium-term
b. Develop an emergency preparedness school curriculum that can be used by teachers and emergency managers for delivery in schools.	<ul style="list-style-type: none"> <li>Having access to lesson plans for each grade that can be implemented in local schools would help advance the level of preparedness of individuals and families.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> <li>Local government</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>School districts</li> <li>FNESS</li> <li>Professional associations*</li> <li>UNBC and other educational institutions</li> </ul>	Medium-term
c. Investigate the use of neighborhood preparedness programs as means of increasing public preparedness for emergencies and disasters within the OBAC region.	<ul style="list-style-type: none"> <li>A neighborhood preparedness program has been developed and implemented in a number of urban areas, however, its applicability in a rural setting is unknown. Implementation of a program that engages rural neighborhoods would be beneficial in advancing the level of public preparedness within the OBAC region.</li> </ul>	<ul style="list-style-type: none"> <li>Provincial government</li> <li>Local government</li> <li>First Nations</li> </ul>	<ul style="list-style-type: none"> <li>UNBC and other educational institutions</li> <li>Professional associations*</li> </ul>	Medium-term

\* Professional Associations may include groups such as the Fire Chiefs' Association of BC, BC Search and Rescue Association, the Emergency Social Services Association, and the BC Association of Emergency Managers.

## 7 Summary

Over the last several years there have been a number of changes which have impacted and are expected to impact, emergency management activities throughout the world. Within OBAC region, the infestation of mountain pine beetle in the forests, changes in climate and increases in industrial traffic present the potential for increased threats to communities. Communities have worked hard to prepare for and manage the current level of emergencies and disasters and plan for any subsequent changes as a result of these phenomena.

Response to emergencies or disasters of a regional scale will require collaboration between all affected communities, agencies and governments in each phase of emergency management (preparedness, response, recovery and mitigation). There are a number of initiatives that can be taken by all levels of government to increase the ability of communities within the OBAC region to prepare for, respond to, recover from and mitigate the effects of emergencies and disasters.

In many cases the initiatives identified in this report build on existing resources, knowledge and capabilities to better ensure and advance the ability of communities to conduct emergency management activities amid changes in climate and through periods of community growth and development. This is not to say, however, that all gaps have been filled and that all needs are met.

Additional resources, such as funding and equipment are required for new initiatives to be supported and implemented within the OBAC region. Fostering a cooperative relationship between all communities and agencies in initiatives such as plan development, exercises and training and resource sharing will further assist with the region's level of preparedness and capacity to respond to regional emergencies. Communities within the OBAC region require access to a broad range of funding sources to support emergency management programs. Creation of additional funding programs, either at the regional, provincial or federal levels, is essential to further development of collaborative efforts between local governments and First Nations. Funding programs that specifically assist with further development of emergency management programs and plans, EOC functionality, ESS services and communication capability are vital.

Many communities across BC have recognized the need and opportunity to work together and have begun taking small steps, such as implementation of mutual aid agreements, as a first step to full integration of emergency management programs. Communities within the OBAC region need to be supported in their efforts to strengthen and formalize their working relationship with neighboring governments so that they can maximize their efforts to take a proactive approach in planning for emergency response that can serve as basis for creation of fully integrated emergency management programs.



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