



Government's Action Plan: Responding to Wildfire and Flood Risks

April 30, 2019 Update

Emergency Management British Columbia

Ministry of Forests, Lands, Natural Resource
Operations and Rural Development

Table of Contents

Introduction	3
Background	4
After Action Reviews	4
Other Relevant Reports	5
2018 Emergency Management Improvements and Investments	5
Recovery Investments	6
2018/19 Partner Engagement on Emergency Management Improvement	7
Broad Engagement	8
First Nations.....	9
Local Authorities	11
Emergency Management Partner Priorities.....	12
Emergency Management Enhancements for 2019	13
Climate Change Adaptation	22
Working Towards a Provincial Adaptation Strategy	22
Other Initiatives Led by the Climate Action Secretariat	23
Initiatives Led by Other Ministries	24
Timeline/Next Steps	25
Appendix 1: Actions Broken Down By Recommendation	26
Appendix 2: 2017/2018 After Action Review Inventory	82

Introduction

The Province commissioned a comprehensive, independent review of the 2017 wildfire and flood seasons. Led by Chief Maureen Chapman and George Abbott, the review resulted in the April 2018 report, [Addressing the New Normal: 21st Century Disaster Management in British Columbia](#), (the *Abbott/Chapman Report*). This report provided 108 recommendations, and continues to serve as a call to action for making positive changes in our emergency management system.

In October 2018, the Province released “Government’s Action Plan: Responding to Flood and Wildfire Risk” (October 2018 Action Plan), in which government committed to regular updates on implementing the 108 recommendations.

This document “Government’s Action Plan: Responding to Flood and Wildfire Risk – April 30, 2019 Update” (April 2019 Action Plan Update) provides updated information on:

- Partner engagement;
- Emergency management enhancements for 2019; and,
- Work underway on each of the 108 Abbott/Chapman recommendations.

The next update will be issued October 31, 2019.

Background

After Action Reviews

In addition to the *Abbott/Chapman Report*, numerous other After Action Reviews (AARs) were completed by various communities and agencies based on the 2017 and 2018 flood and wildfire seasons.

Undertaking AARs is consistent with sound emergency management practices and the principle of continuous improvement. Emergency management organizations such as the BC Wildfire Service (BCWS) and Emergency Management BC (EMBC) undertook AARs, as did numerous First Nations, local authorities, and other organizations.

Lessons and findings continue to emerge from the 2017 events, and for some partners, the after action review process for 2018 events has extended into spring 2019. This is in part due to the significant demands on those communities that continue to devote time and resources to recovery operations. Thus, lessons from 2018 events will continue to emerge this year.

Communities and agencies have devoted significant effort and resources towards the completion of these AARs. Their lessons and recommendations are an invaluable resource for all partners undertaking emergency management improvements. While the experience and findings of each community and partner are necessarily unique, there are strong themes and common threads emerging through these various reviews.

Appendix 2 lists those AARs that have been analyzed as part of the *Abbott/Chapman Report* follow-up process. These AARs, along with the original *Abbott/Chapman Report*, and direct partner engagement, have served to reinforce some themes, identify new issues, and enhance the Province's understanding of the emergency management challenges faced by all emergency management partners, including First Nations and local authorities. These reviews have had a direct influence on the emergency management priorities pursued in preparation for the 2019 flood and wildfire seasons and beyond.

Other Relevant Reports

In addition to the *Abbott/Chapman Report*, and numerous other AARs, two other reports continue to influence the continuous improvement of emergency management in British Columbia.

The Auditor General of British Columbia's February 2018 report on climate change risk, [*Managing Climate Change Risks: An Independent Audit*](#), reinforces and expands on a central message of the *Abbott/Chapman Report* – that intense flood and wildfire seasons will become increasingly common as the climate changes. According to Abbott and Chapman, when developing plans for prevention, preparedness, response and recovery, emergency managers must consider both the long-term, growing impacts of climate change and the associated increasingly severe weather events. Read more about the provincial government's approach to climate change adaptation in the "Climate Change Adaptation" section below.

The House of Commons Standing Committee on Indigenous and Northern Affairs' June 2018 report, [*From the Ashes: Reimagining Fire Safety and Emergency Management in Indigenous Communities*](#), deals with fire safety and emergency management in Indigenous communities across Canada. In October 2018, the federal government accepted the report's 11 recommendations. The report is pertinent with regard to First Nations emergency management in British Columbia and supports a number of *Abbott/Chapman Report* recommendations.

2018 Emergency Management Improvements and Investments

In the wake of the 2017 flood and wildfire seasons, governments recognized the need to take immediate action to address gaps identified in post-event reviews. Provincial agencies and emergency management partners such as local authorities and First Nations undertook significant work through late 2017 and early 2018 to prepare for the next flood and wildfire seasons and to assess emergency management systems. The release of the *Abbott/Chapman Report* in April 2018 provided an additional driver for improvement efforts.

Prior to and during the 2018 flood and wildfire events, significant emergency management improvements occurred in the areas of:

- Integration and collaboration;
- First Nations emergency management;
- Partner engagement;
- Knowledge and tools;

- Operations;
- Communication and public education;
- Emergency Support Services; and,
- Recovery.

Please refer to “[Government’s Action Plan: Responding to Flood and Wildfire Risk](#)” (October 2018) for details on these 2018 emergency management improvements.

Recovery Investments

Significant investments have also been made in land-based and community recovery associated with 2017 and 2018 floods and wildfires. These investments include:

- Land-based recovery: Approximately \$280 million for wildfire land-based recovery, including the following activities:
 - Wildfire mitigation and reforestation programs in the Cariboo;
 - Recovery, resilience, and rehabilitation in all affected areas; and,
 - Other land-based investments.
- Canadian Red Cross (Wildfire recovery): Provincial funding of \$110 million in total has been provided to the Canadian Red Cross for 2017 and 2018 wildfire community recovery. This amount has been augmented by significant federal and private donations. Together, these contributions help provide support to individuals, community groups, small businesses, non-profit organizations, and First Nations cultural livelihoods.
- Canadian Red Cross (Flood recovery): Provincial funding of \$5.7 million has been provided to the Canadian Red Cross for 2018 flood recovery. This funding, also augmented by additional private donations, provides support for flood recovery in the Regional District of Kootenay Boundary.
- AgriRecovery: The Province and the Government of Canada have together contributed over \$9.8 million in support of 2017 and 2018 wildfire-affected ranchers. This is in addition to \$6.2 million for repair or replacement of Crown range infrastructure, including 100 kilometres of livestock highway fencing destroyed by wildfire.
- Rural Dividend Fund: The Province has also contributed over \$7.6 million to rural communities affected by the 2017 and 2018 wildfires through the Rural Dividend Fund – Special Circumstances. These funds support community-led projects that contribute to restoring the affected rural economies.
- Additional funding: \$1.75 million was provided by the Province to the Tahltan First Nation to assist with housing needs in the communities of Telegraph Creek and Dease Lake.

Grand Forks and Kootenay Boundary Regional District

There have been significant recovery investments for Grand Forks and the Regional District of Kootenay Boundary. In 2018, the B.C. government, with support from the Canadian Red Cross (CRC), introduced a pilot program to help residents impacted by flooding in this area. The Household Emergency Assistance Program (HEAP) provides additional support for those people who have not been able to return home when Emergency Support Services (ESS) concludes. The program has received approval for a final extension to June 30, 2019 and continues to support households that are primary residences and have been deemed uninhabitable by the local authority. The Province will assess the effectiveness of this pilot program.

In partnership with the CRC, and reflected in the \$5.7 million noted above, the Province provided \$2.9 million specifically for support to small businesses. This program allows for up to \$18,500 of support beyond the initial \$1,500 provided by the CRC. The program intake closed on March 15, 2019. Over 190 applications were received. Overall, to date, the Province has provided over \$19 million in support of recovery in the Grand Forks area for CRC programming, mental health and wellness, immediate mitigation, technical and operational support and preparation of recommendations for long term community solutions. This funding also includes \$1.2 million from the Rural Dividend Fund for economic recovery.

The Province, Grand Forks and the Regional District of Kootenay Boundary are working together to identify solutions for properties in neighbourhoods that are now slated to return to the natural flood plain.

2018/19 Partner Engagement on Emergency Management Improvement

Invaluable information has been gleaned from the various AARs addressing the 2017 and the 2018 floods and fires. However, ultimately, a deeper understanding of the challenges faced by British Columbia's emergency management partners, and the best emergency management solutions, come from direct discussion and engagement.

For that reason, engaging with partners has become a year-round activity for the BCWS and EMBC, as well as for other provincial organizations involved in flood and wildfire planning, mitigation, response and recovery, such as the Ministry of Health. These engagement efforts contribute to continuous improvement in emergency management, through

enhancing a mutual understanding of roles, responsibilities, and challenges, working together on solutions, and working to anticipate the challenges of future emergency events.

Broad Engagement

Many engagement activities involve a variety of partners, such as First Nations, local authorities, volunteer organizations, and private sector organizations. Such engagements include:

- Community visits by program staff (e.g. EMBC regional staff) to assist with Hazard Risk and Vulnerability Analysis, Community Emergency Preparedness Fund projects, Public Safety Lifeline Volunteer program administration, Emergency Support Services (ESS) training, emergency management training, and community profiles.
- After Action Reviews.
- Training events and emergency management exercises involving First Nations, local authorities, and private sector entities.
- Conferences such as the annual Emergency Preparedness and Business Continuity Conference and other learning opportunities.
- Working with communities through the Community Resiliency Investment program (See “Enhancements for 2019” below).
- Regular contact by the BCWS and the Office of the Fire Commissioner (OFC) with communities as part of the FireSmart program which promotes household and community fire prevention.
 - In 2018, 26 communities in B.C. either renewed or achieved FireSmart Canada Community Recognition status, and there were 320 newly certified Local FireSmart Representatives, a result of eight Local FireSmart Representative Workshops conducted across the province.
 - BCWS staff promoting FireSmart also engages with the public, stakeholders, and First Nations, at conventions and other events throughout the year.
- Year-round work by provincial staff in partnership with critical infrastructure asset owners through the Critical Infrastructure Steering Committee which is chaired by EMBC.
- Year-round work by EMBC with the CRC and other agencies represented on the Integrated Disaster Recovery Council.
- Partner interaction leading up to flood and wildfire seasons.
 - In spring and fall, EMBC leads seasonal readiness meetings in every region of the province. The BCWS participates in these meetings, as do numerous other provincial agencies, local authorities, First Nations, non-governmental organizations and other partners.

- In the January to March period, the BCWS also holds specific preparedness meetings across the province. These include:
 - Farm and Ranch Wildfire Preparedness Community Planning Meetings: These meetings help farmers and ranchers understand local wildfire risks, connect with provincial and other officials, and plan effectively for the coming wildfire season.
 - Industry Preparedness Workshops: These workshops help forestry industry representatives understand local wildfire risks, connect with local BCWS officials, and plan for the upcoming wildfire season. Industry preparedness also includes joint planning with the BCWS regarding industry firefighting efforts and the use of industry resources during BCWS operations.
- Prior to the wildfire season, Fire Centre Managers with the BCWS also reach out to local First Nations and non-Indigenous community representatives to ensure a common understanding of roles and responsibilities during wildfire response.
- In total, in preparation for the 2019 wildfire season, the BCWS has scheduled over 250 dedicated engagement sessions with a broad range of partners including First Nations, local authorities, contract crews, agricultural industry representatives, forest industry representatives and others. These engagements encompass activities related to prevention, training, contract services, and readiness.
- All emergency management organizations also undertake constant communication and real-time learning with emergency management partners during response and recovery operations.

First Nations

Some engagement is specific to certain partners, such as focused engagements with First Nations leadership, communities, and emergency management practitioners.

First Nations governments have jurisdiction over emergency management in their communities. All aspects of emergency management affecting First Nations communities and the land base on which they live and derive a livelihood must be undertaken in a way that recognizes this jurisdiction, as well as the rights and traditional knowledge held by First Nations. The Province and the federal government continue to engage with First Nations communities and leadership to enhance emergency management through a partnership approach as a means to fully adopting and implementing the United Nations Declaration on

the Rights of Indigenous Peoples (UNDRIP), and the Calls to Action of the Truth and Reconciliation Commission.

This engagement is occurring through a number of mechanisms, including:

- **EMBC First Nations Emergency Management Partnership Tables:** Regional partnership tables are in place across B.C. to provide a venue for First Nations and provincial agency emergency managers to discuss and partner on emergency management issues and initiatives at a practitioner level.
- **Disaster Recovery Framework:** The development of the disaster recovery framework has been informed by discussion with several impacted communities (e.g. Bonaparte Indian Band, Ashcroft Indian Band, and Tahltan First Nation) and will be implemented with First Nations involvement.
- **Tripartite Agreement:** A tripartite emergency management Memorandum of Understanding (MOU) between B.C., ISC, and First Nations Leadership Council/First Nations Emergency Services Society (FNESS) has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management. This tripartite agreement establishes a collaborative and constructive working relationship, which focuses on issues of emergency management in B.C. at the provincial, regional and local levels. The implementation of the *Abbott/Chapman Report* recommendations is expected to be a key part of the workplan to be developed under this MOU.
- **T̓silhqot'in Nation:** EMBC, MIRR, ISC, BCWS and the T̓silhqot'in Nation have signed the tripartite Collaborative Emergency Management Agreement (CEMA) and are actively involved in the implementation of this agreement, including the recent release of the T̓silhqot'in Nation's report on the 2017 wildfires in T̓silhqot'in Nation territory, titled "*The Fires Awakened Us (Nagwedižk'an Gwaneš Gangu Chinidžed Ganexwilagh)*".
- **First Nations Leaders Gathering (November 29-30, 2018):** EMBC, the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD), the Ministry of Indigenous Relations and Reconciliation (MIRR), and Indigenous Services Canada (ISC) met with First Nations Leadership Gathering delegates to discuss the 2017 and 2018 floods and wildfires and the *Abbott/Chapman Report* recommendations.
- **First Nations Health Authority:** EMBC, MIRR, ISC and the Ministry of Health are also actively engaged with the First Nations Health Authority on emergency management coordination and improvement topics in preparation for the 2019 wildfire season.
- **First Nations' Emergency Services Society (FNESS):** FNESS has a mandate to assist First Nations in developing and sustaining safer and healthier communities through

delivery of programs and services that include training, capacity development and emergency response services, and to support the First Nations Leadership Council mandate. FNESS continues to be a key partner in First Nations emergency management in B.C., and is actively engaged with the Province across all phases of emergency management.

- **Engagement Specific to Wildfire:** The BCWS meets regularly with Indigenous communities to discuss emergency management topics such as: firefighter recruitment opportunities with the BCWS; contract opportunities for Type 2 and Type 3 fire crews; communications; pre-season forecasts; season debriefings; and, the use of heavy equipment and firefighting equipment caches in remote communities.

The Province is also incorporating recommendations from various First Nations AAR documents related to 2017 and 2018 events as prevention, preparedness, response and recovery activities are enhanced (See Appendix 2).

Local Authorities

Like many First Nations, local authorities significantly contributed to the *Abbott/Chapman Report* itself, and have helped to shape the provincial response to this report. Engagement with local authorities on emergency management enhancement is taking place through a number of mechanisms including the following:

- **Union of British Columbia Municipalities (UBCM) Convention meetings:** As noted in the October Action Plan, during the 2018 UBCM Convention in September 2018, senior EMBC and FLNRORD staff held 44 meetings with local authority and First Nations delegates to collect input and observations on the response to 2017 and 2018 floods and wildfires.
- **UBCM Executive Committee:** The UBCM Executive Committee has created a Flood and Wildfire Advisory Committee to work with the Province on emergency management enhancements with respect to these hazards. This committee met first on April 11, 2019 and has conducted two meetings to date.
- **Local Authority Partnerships:** EMBC has connected with and briefed representatives of the Integrated Partnership for Regional Emergency Management (IPREM – A partnership of B.C. and the Metro Vancouver Region) and the Regional Emergency Management Partnership (REMP – a partnership of B.C. and the Capital Regional District) on the Abbott/Chapman follow-up activities. These briefings have helped ensure that local authority priorities are understood. Broader emergency management enhancement work continues year-round through these partnership organizations.

- **Local Government Area Associations:** The Province has reached out to local government area associations in B.C. to offer additional opportunities for discussion and input. Currently, provincial representatives are scheduled to present on floods and wildfires at the spring annual general meetings of the Southern Interior Local Government Association and the North Central Local Government Association.

Emergency Management Partner Priorities

As noted above, the needs and priorities of the Province's emergency management partners with respect to floods and wildfires have been extensively communicated to the Province through AARs and other reports, in person meetings, and conferences. From the AARs listed in Appendix 2 alone, there are approximately 1,000 formally documented recommendations. As part of the follow-up to the 2017 and 2018 flood and wildfire seasons, the Province has been having iterative discussion with partners to make sure that recommendations have been understood, and that needs are correctly identified. There are consistent themes and priorities evident in the input from partners. Most of these themes and priorities reinforce recommendations in the *Abbott/Chapman Report*.

Partner priorities include:

1. Additional flood and wildfire mitigation investments.
2. Increased provincial response and coordination capacity.
3. Enhanced communication and engagement by provincial agencies with First Nations, the public, and local authorities.
4. Collaboration with First Nations in all phases of emergency management.
5. Increased local emergency management and firefighting capacity.
6. Increased use of local resources in wildfire firefighting efforts.
7. Improved community recovery support and integration of recovery programming.
8. Modernized Emergency Support Services.
9. Improved processes for evacuations and the administration of access to evacuated areas (roadblocks).
10. Clarified and improved financial reimbursement processes.
11. Increased cultural awareness/sensitivity in emergency management.
12. Increased use of Indigenous traditional knowledge as part of emergency response and management.

Action on these priorities is detailed in the following section.

Emergency Management Enhancements for 2019

Significant emergency management improvements were introduced in 2018. Enhancements for 2019 build upon these 2018 improvements, and also introduce improvements in new areas. The Province's 2019 emergency response and emergency management enhancement priorities have been significantly guided by the priorities identified by emergency management partners, as well as the *Abbott/Chapman Report* and other AARs. Enhancements for 2019 are identified below, categorized under the identified partner priorities.

1. Flood and Wildfire Mitigation

Mitigation activities, those activities which prevent or reduce the impact of hazards such as wildfire and flooding, are an essential element of emergency management. The Province is investing significant funding in flood and wildfire mitigation, through a variety of initiatives.

- a) Community Resiliency Investment (CRI) Program: The CRI program was established in September 2018 to assist local authorities and First Nations to lower wildfire risks around their communities. As part of Budget 2019, the B.C. government has provided an additional \$10 million for a program total of \$60 million.

Program elements include:

- A holistic approach to wildfire risk reduction and fuel management treatments;
- Inclusion of fire prevention activities on provincial Crown land and private land — in addition to local authority and reserve land; and,
- 100 percent funding for approved projects.

The development of this program was a collaborative partnership between FLNRORD, UBCM, FNESS, and the Forest Enhancement Society of BC (FESBC). As of April 2019, over \$6 million has been disbursed to 85 local authorities and First Nations from the first application intake. The next application intake window closes October 18, 2019.

- b) Disaster and Flood Mitigation Funding: EMBC's Disaster Mitigation Unit (DMU) coordinates disaster and flood mitigation funding through programs such as the [Community Emergency Preparedness Fund \(CEPF\)](#), the [National Disaster Mitigation Program \(NDMP\)](#), and any additional EMBC funding opportunities in a given year. DMU also collaborates with other provincial ministries to coordinate provincial mitigation activity and collectively prioritize mitigation projects for the Province. Examples of mitigation projects include flood risk assessments, flood mapping, as well as dike upgrades and construction.

- The CEPF is a suite of funding programs intended to enhance the resiliency of First Nations, local authorities, and individual community members by reducing the risk of disasters and improving response capacity. Funding from CEPF is directed to both flood mitigation projects and emergency management capacity and planning projects (e.g. ESS equipment and training, Emergency Operations Centre equipment and training, and evacuation route planning). Funding is provided by the Province and administered by UBCM. The Province has provided \$33.5 million towards CEPF, since the fund's inception in April 2017.
 - NDMP is a 5-year cost-sharing funding program with Public Safety Canada, focused on flood mitigation. Through NDMP, 82 projects with a total value of \$43 million (\$15 million provincial contribution) have been approved. Several of these projects have concluded and many are underway.
 - From time to time there are additional funds available to EMBC to support disaster mitigation projects in the province. Since the 2015/16 fiscal year, EMBC has funded 53 disaster mitigation projects in B.C. with a total value of \$104.4 million with \$91.6 million coming from the Province. This includes 3 projects totalling \$1.4 million (provincial funding) approved in 2018/19.
- c) Prescribed Fire: The Province is developing a more comprehensive prescribed burning program, backed by an initial \$10 million. Initial plans include:
- Developing a framework to clarify how prescribed fire can be re-introduced to the land base;
 - Collaborating with local authorities, First Nations, and stakeholders so that everyone understands and embraces prescribed fire;
 - Linking burning risk reduction planning with land use planning;
 - Working with partners to retrain/refresh knowledge and skills in burning;
 - Incorporating and reconciling Indigenous traditional knowledge with western science; and,
 - Partnering with local communities, First Nations, and industry to support more fire on the land base, with funding through FESBC and CRI programs.

2. Provincial Response Capacity

The Province has made significant enhancements to provincial emergency response capacity to improve wildfire firefighting and community support. These enhancements include more staffing, more aircraft, and more technology. (Also see “Use of Local Resources” below for details on contractor and industry capacity enhancements.)

a) Staffing:

- EMBC is increasing staff capacity to work with partners to prepare for, respond to, and recover from emergencies such as floods and fires.
- EMBC is increasing the roster of trained and available Temporary Emergency Assignment Management System (TEAMS) personnel who provide assistance during emergency activations. Personnel with enhanced cultural awareness/agility will be triaged for supporting engagement with First Nations emergencies.
- EMBC and FLNRORD have realigned resources to better support recovery and disaster risk reduction. Community recovery resources from FLNRORD have moved to EMBC under a new division.
- The BCWS is expanding its Research and Innovation Program by partnering with academic institutions to establish new innovative tools, software and equipment and working with the broader vendor community.
- The BCWS has established a BCWS Predictive Services Unit. The group is working to:
 - Utilize the application of artificial intelligence and machine learning to increase the effectiveness and efficiency of fire behaviour prediction and modelling; and,
 - Develop an artificial intelligence and machine learning-driven wildfire prioritization / triage model.
- Effective April 1, 2019, the BCWS is converting some BCWS seasonal staff to full-time status. This will increase resources to allow for more preparedness and response.

b) Aircraft:

- The BCWS is improving integration of helicopters and fixed-wing aircraft to maximize their efficiency, and increase the length of firefighting aircraft contracts. For example, in 2019, the operating/availability period for the Fire Boss skimmer group has been extended from 100 to 120 days.
- The BCWS is adding five additional medium-lift helicopters, which will be under long-term contract agreements for the 2019 fire season.

c) Technology and Innovation:

- The BCWS is giving staff increased access to technology in the field, including tablet computers and unmanned aerial vehicles (drones) to assist with fire mapping and infrared scanning.

- The BCWS held a vendors' forum in March 2019 to review recent technological advancements and how they could benefit British Columbia.

3. Communication and Engagement

EMBC and the BCWS undertake robust engagement and communication with emergency management partners before and during emergency events. Several new tools will aid in this effort during 2019.

- a) Concept of Operations Document: For the 2019 wildfire season, EMBC and the BCWS will be distributing a short guidance document (a "Concept of Operations") which will provide simplified and clear guidance to emergency partners attempting to interact with elements of the emergency management system such as EMBC and the BCWS before, during, and after wildfire events. If this document proves useful to users, it may be expanded to become an all-hazard document.
- b) Common Operating Picture (COP): With GeoBC, EMBC is expanding the functionality of the Common Operating Picture, an information technology system which provides up-to-date mapping and other information to emergency managers. Certain data elements from this system may also be made available for the public's information.
- c) PreparedBC: EMBC has launched a Facebook page for PreparedBC, adding a communications channel to assist communities and individuals to prepare for hazards in their area.
- d) FireSmart BC: The BC FireSmart Committee launched a new website (firesmartbc.ca) and educational materials to assist communities and individuals in becoming FireSmart.

4. First Nations Collaboration

Effective emergency management requires partnership with First Nations on all aspects of emergency management decision making, and all phases of emergency management implementation. A number of initiatives and practices related to engagement and collaboration with First Nations in emergency management decision making and operations were detailed in the October 2018 Action Plan, such as dedicated First Nations coordination calls, dedicated First Nations coordination operations staff, and the First Nations toolkit. Emergency response and coordination activities in 2019 will further build on and formalize these initiatives and practices. This will be aided by the dissemination of a First Nations "Concept of Operations" document. EMBC and the BCWS, in cooperation with other partners, are developing a Concept of Operations document which formalizes processes of

decision making in partnership with First Nations and the seamless connection of First Nations' and provincial emergency management decision-making processes and communications flows. This document will formalize, standardize, and communicate the best practices regarding collaboration with First Nations on emergency management processes that have been incrementally introduced over 2017 and 2018.

5. Local Capacity

First Nations and local authorities require adequate capacity to address emergency situations, and need to be more involved in emergency operations. While capacity challenges remain, several improvements are helping to address local capacity and involvement issues.

- a) The Province has provided \$33.5 million towards the [Community Emergency Preparedness Fund \(CEPF\)](#), since the fund's inception in April 2017 (See also “#1. Flood and Wildfire Mitigation” above).
- b) The BCWS and the Office of the Fire Commissioner are working on an expanded structure protection program, which will provide additional resources in rural and wildland-urban interface areas.
- c) The BCWS is making new training available for structural firefighters who respond to wildfire incidents.
- d) EMBC is providing user support to local authorities and First Nations who are using the Emergency Management Planning Toolkit, launched in March 2019, to develop or update all-hazard emergency management plans, improving interoperability of emergency plans across the Province.

6. Use of Local Resources

First Nations and local authorities want to maximize opportunities to participate in wildfire response, both from a contracting and employment perspective, and to assist in the protection of their communities and local environment. These local resources provide invaluable assets to assist with provincial firefighting efforts. The BCWS is increasing response capacity by making additional use of local resources.

- a) The BCWS is adding up to 80 additional Type 2 contract firefighters, bringing that total up to 160. Once contracted, the operating period for these resources will also be

extended from 80 to 100 days. BCWS is adopting more flexible ways to configure, allocate and deploy these firefighting resources.

- b) Working with ISC and FNESS, the BCWS is developing First Nations Type 2 firefighting crews.
- c) The BCWS is assisting interested Indigenous communities in responding to standing offer requests to supply Type 3 fire crews. The BCWS also provides advice to Indigenous communities that are interested in upgrading their existing Type 3 crews to Type 2 crews (see Appendix 1 legend for information on Type 2 and Type 3 crews).
- d) Substantial progress was made with First Nations and key stakeholders in advance of 2018 fire season that increased response capacity and coordination. The BCWS has continued to build on that. For example, the BCWS has developed standardized protocols and procedures for engaging industry to provide equipment and resources to assist with firefighting as needs dictate. The process was developed and tested in the Cariboo Fire Centre and is being rolled out to all other Fire Centres over the next two years.
- e) The BCWS is increasing forest industry involvement in wildfire response efforts, including holding joint training workshops with the forest industry and streamlining/standardizing the financial process for provided services.
- f) The BCWS is enhancing industry integration by developing a one-day industry training workshop and expanding the use of Equipment Strike Teams. These strike teams are a combination of heavy equipment, operators and line locator personnel that can be deployed in response situations.

7. Community Recovery

The need for focussed community recovery efforts was one of the most significant lessons of the 2017 and 2018 floods and wildfires. Community recovery requires focussed support, and the delivery of recovery programming needs to be integrated across agencies.

EMBC, supported by numerous other ministries and partners, is developing a disaster recovery framework. This disaster recovery framework will:

- a) Coordinate recovery activities across the provincial government in support of communities through inclusive measures that reduce vulnerability.

- b) Clarify roles and responsibilities of provincial ministries, First Nations, local authorities, nongovernment organizations, Crown corporations, federal government, and other recovery partners.
- c) Leverage existing operational and governance structures at the local, regional, and provincial levels by aligning with the BC Emergency Management System – a framework that provides a coordinated and organized approach to emergencies and disasters. Specific recovery considerations and criteria will be provided to guide the escalation of recovery coordination from the local level to the regional and provincial levels.
- d) Provide accountability and leadership across the various sectors of community recovery (e.g. people and communities, environment, economy, and infrastructure).
- e) Provide guidance on funding programs and financial management at the provincial and federal levels.
- f) Ensure administrative fairness in the allocation of post-incident recovery resources.
- g) Identify considerations for communities when developing monitoring and evaluation systems to measure the progress of their recovery efforts.
- h) Incorporate key components of the Sendai Framework which will align with future development of a modernized Emergency Program Act.
- i) Assist with effectively addressing the differential impacts of emergencies on various populations, including vulnerable populations, which is consistent with the [Gender Based-Analysis Plus](#) (GBA+) approach to policy analysis.
- j) Promote disaster risk reduction principles to minimize future damage to the community and environment.

8. Emergency Support Services (ESS)

ESS provides support to those who have been evacuated from their homes during emergency events. This service, provided largely by volunteers, is a vital part of B.C.'s emergency management system. However, the ESS system has been under enormous pressure during the 2017 and 2018 seasons. The process for the delivery of ESS needs to be

modernized, streamlined, and delivered in a way that is culturally agile, and considers the ways that evacuations impact different populations and groups differently. In 2018, to address these challenges, EMBC initiated an ambitious project to streamline and modernize the ESS system. The objectives of this initiative are to:

- Provide access to digital services for evacuees;
- Decrease the time it takes to receive services; and,
- Ensure the protection of personal data.

The resulting enhancements will be piloted in four communities during the 2019 wildfire season (Kamloops, Tk'emlups te Secwepemc, Regional District of Central Okanagan and Prince George), and lessons from this pilot will inform wider ESS program modernization. This ESS system can also be deployed and available for any community not involved in the pilot project that is unexpectedly asked to host large numbers of evacuees.

9. Evacuations

Challenges associated with how evacuation orders are imposed, lifted and administered (e.g. roadblocks) have been a significant issue for First Nations, local authorities, and the public during 2017 and 2018 events. Issues include:

- a) Integrating communications with the public, and among governments and agencies;
- b) Recognition of the authority held by First Nations over their lands and emergency management for their communities (including decisions regarding evacuations);
- c) Improving how roadblocks are administered when an evacuation order is in place; and,
- d) Clarifying appropriate processes if a community or individual decides not to evacuate, once a recommendation to evacuate has been provided by an emergency management agency (e.g. the BCWS).

Provincial agencies have undertaken focussed work in preparation for the 2019 wildfire season to address issues related to evacuation orders. In collaboration with key agency representatives, EMBC is revising the Evacuation Operational Guidelines to better support the effective coordination of all emergency management partners in evacuation circumstances. The focus of this effort is on clarifying roles and responsibilities, decision making processes, and communication strategies, with a rollout of revised Evacuation Operational Guidelines and companion components planned for spring 2019. The revised Evacuation Operational Guidelines are expected to provide greater clarity, and more

effective processes, regarding how evacuation orders are imposed, lifted, and administered (including the operation of roadblocks).

10. Financial Reimbursement

The processes for reimbursement of emergency response and recovery expenses is unclear and, in some cases, not expeditious enough to meet the needs of communities and individuals. In cooperation with other funding agencies, such as the BCWS and ISC, EMBC is providing improved guidance and training regarding emergency response and recovery expenditure reimbursement processes and eligibility guidelines.

11. Cultural Awareness/Sensitivity

Emergency response and emergency management practices must be culturally aware/sensitive in order to be effective. The Province is adopting a multi-pronged approach to enhancing cultural awareness/sensitivity in the practice of emergency management.

- EMBC and FLNRORD staff are undertaking focussed “Learning for Reconciliation” training and education to improve cultural awareness and sensitivity with respect to Indigenous cultures.
- The BCWS is continuing to work with Indigenous communities to organize cross-cultural training sessions, which will be facilitated by a First Nations service provider.
- Training in cultural awareness/sensitivity with respect to First Nations is also accessible to all provincial public servants.
- ESS volunteers involved in Mobile Support Teams have been given specific training in cultural awareness/sensitivity.
- Over the longer term, EMBC will also be working with training providers to incorporate cultural awareness/sensitivity into the standard training for emergency management volunteers such as ESS volunteers.

12. Traditional Knowledge

Emergency response and emergency management practices must also make effective, and respectful, use of Indigenous traditional knowledge. A provincial initiative is currently under development which will develop policies and procedures, with First Nations guidance, regarding use of traditional knowledge in emergency management. Engagement with First Nations partners to date has stressed the importance of such factors as ensuring adequate protection of sensitive traditional knowledge (e.g. the location of culturally significant sites). Considerations related to the Freedom of Information and Protection of Privacy Act, and other factors must also be addressed in a structured and consistent fashion. FLNRORD has contracted with FNESS and is working in partnership with EMBC to deliver a dialogue

session in 2019 with First Nations representatives on the topic of traditional knowledge. This session will initiate a process of braiding/interweaving Indigenous and non-Indigenous ways of knowing, so that both can be used in a complementary way across all phases of emergency management in British Columbia.

Climate Change Adaptation

The *Abbott/Chapman Report* identifies climate change as a key factor driving the increasing severity of emergency events in British Columbia. The report indicates climate change can be expected to influence severe weather-related events into the future. As noted above, the BC Auditor General's February 2018 report, [*Managing Climate Change Risks: An Independent Audit*](#), emphasizes British Columbians must prepare for more frequent and severe floods and wildfires, as well as other hazards, due to the impacts of climate change.

The process of adjusting to the impacts of climate change, such as through the development of upgraded infrastructure (e.g. dikes), new plans (e.g. drought plans), research into climate adaptive species, and so on, is referred to as 'adaptation.' Climate change adaptation is an important part of B.C.'s climate change plan along with carbon emissions reductions and mitigation. Action to address the recommendations of the *Abbott/Chapman Report* will be closely linked to the Province's work on climate change adaptation, led by the Ministry of Environment and Climate Change Strategy (ENV).

Working Towards a Provincial Adaptation Strategy

The Province is taking important steps to manage the risks of climate change. Critically, the Province aims to first fully understand climate change hazards to create an effective foundation for predictable and consistent provincial action. The results of these first steps will inform the provincial climate change adaptation strategy in 2020. Steps include:

- **Strategic Provincial Climate Risk Assessment:** The provincial climate risk assessment will result in a framework for provincially significant climate-related risks that can be used to prioritize adaptation responses across ministries. The assessment will enable government to compare different climate-related risks, and compare those with other risks. Governments can then develop appropriate responses to priority risks and assist in identifying potential situations where current response capacity may be exceeded.
- **Climate Change Accountability Act:** In May 2018, the Province approved amendments to the *Climate Change Accountability Act* (formerly the *Greenhouse Gas Reduction Target Act*). One of the amendments requires the Province to report publicly on how it is preparing for climate change. Starting in 2020, the Province will report on plans, actions and progress towards climate adaptation.

- **Provincial Adaptation Strategy:** The Government will release a new, comprehensive climate change adaptation strategy in 2020. Led by the Climate Action Secretariat (CAS) in ENV, the Strategy will be developed with early and meaningful engagement with Indigenous peoples. The province will also engage with rural and urban communities, First Nations, professional and industry associations, non-profit organizations, youth and others throughout B.C. to provide input into the Strategy. The Strategy will be a collaborative effort from across government informed by the results of the provincial climate risk assessment. Engagement is anticipated in spring and fall of 2019, and public policy proposals are expected to be released in early 2020.
- Together with other ministries, CAS will work to align the Strategy and existing initiatives across government and sectors that are currently making progress toward understanding and addressing climate risks.
- CAS is also working to develop tools and engagement resources for ministries, the broader public service, Indigenous peoples, local authorities, professionals, and others. This will build capacity and readiness to understand climate risks and meaningfully contribute to the development of the Adaptation Strategy.

These actions complement work underway within specific ministries and at other agencies such as local health authorities and school districts. Such work includes strategies to reduce climate risk and address gaps in climate data, resources and tools.

Other Initiatives Led by the Climate Action Secretariat

CAS is partnering with other ministries and organizations throughout B.C. to leverage federal funding for adaptation projects, including:

- Infrastructure Canada's Disaster Mitigation and Adaptation Fund which provides funding support for a limited number of large-scale infrastructure projects with a minimum cost of \$20 million.
- Crown-Indigenous Relations and Northern Affairs Canada's First Nation Adapt Program which provides funding for First Nation communities supporting climate adaptation activities.
- The Fraser Basin Council (FBC) through programs such as the Regional Adaptation Collaborative which is building adaptation capacity throughout B.C.
- B.C. implementation of the Natural Resources Canada "Building Regional Adaptation Capacity and Expertise" (BRACE) program to develop training for professionals on climate risk and adaptation.

Initiatives Led by Other Ministries

Other B.C. ministries and agencies are also leading specific efforts on climate adaptation.

- GeoBC (in FLNRORD) received funding from Public Safety Canada's (PSC) National Disaster Mitigation Program (NDMP) to acquire LiDAR (Light Detection and Ranging) and orthoimagery for high-resolution mapping of Vancouver Island and the Columbia Basin's river and coastal flood areas. When completed, the data will be available to local and regional governments and First Nation communities to support climate risk assessment and adaptation. LiDAR acquisition has been completed for the Lower Mainland and Okanagan.
- EMBC supports projects to enhance the resiliency of local authorities through disaster risk reduction funding, the Community Emergency Preparedness Fund administered by UBCM, and the PSC's NDMP.
- The Provincial Government introduced the Community Resiliency Investment program in September 2018. The program, collaboratively administered by UBCM and FNESS, is intended to reduce wildfire risks and wildfire impacts in eligible B.C. communities by providing funding and support to complete FireSmart initiatives, including priority fuel management activities.
- Through federal funding under the Canadian Agricultural Partnership, the Ministry of Agriculture is supporting the efforts of industry to develop innovative products, tools and processes to adapt to climate change.
- FLNRORD is leading the development of a flood risk strategy expected to be completed in 2021/22.
- ENV and FLNRORD are developing a drought management strategy.

Timeline/Next Steps

- **October 31, 2018:** Release of the October 2018 Action Plan. **Complete.**
- **November 2018 to February 2019:** Conduct AARs for 2018 events. **Many complete.**
- **November to December 2018:** Establish and initiate partner engagement processes. **Complete and ongoing.**
- **April 30, 2019:** April 2019 Action Plan Update. **Complete.**
- **May to September 2019:** Review additional organizational learnings (depending upon severity of the 2019 flooding and wildfire seasons) and assess against post-2017 and 2018 emergency management improvements.
- **October 31, 2019:** Action Plan – Provide progress update.
- **February 2020:** Provincial budget: Demonstrate the Province and individual ministries have accounted for longer-term recommendations.
- **2020:** *Emergency Program Act* – Update the *Act* accordingly.
- **2020:** Climate Change Adaptation Strategy.
- **April 30, 2020:** Action Plan – Provide progress update.
- **October 30, 2020:** Action Plan – Final progress update.

Appendix 1: Actions Broken Down By Recommendation

Status of recommendations:

- Complete = 33 recommendations
- Substantial Improvement = 20 recommendations
- Underway = 42 recommendations
- Further Analysis/Discussion Required = 9 recommendations
- Alternate Approach Used = 4

Legend:

Blue highlight: primary responsibility – the Province	Green highlight: primary responsibility – Canada
Orange highlight: primary responsibility – the Province and Canada	Yellow highlight: primary responsibility – First Nations and local government

BCWS = BC Wildfire Service

CEMA = Collaborative Emergency Management Agreement

CEMP = Comprehensive Emergency Management Plan

COP = Common Operating Picture

CRI = Community Resiliency Investment

EMBC = Emergency Management BC

ENV = Ministry of Environment and Climate Change Strategy

ESS = Emergency Support Services

FESBC = Forest Enhancement Society of BC

FLNRORD = Ministry of Forests, Lands, Natural Resource
Operations and Rural Development

FNESS = First Nations' Emergency Services Society

FNHA = First Nations Health Authority

FNLC = First Nations Leadership Council

HEMBC = Health Emergency Management BC

HRVA = Hazard Risk and Vulnerability Analysis

IFMO = Indigenous Fire Marshal Office

ISC = Indigenous Services Canada

MOU = Memorandum of Understanding

OCF = Office of the Chief Forester

OFC = Office of the Fire Commissioner

PECC = Provincial Emergency Coordination Centre

PREOC = Provincial Regional Emergency Operations Centre

PSC = Public Safety Canada

RCMP = Royal Canadian Mounted Police

UBCM = Union of BC Municipalities

Type 2 Crews = Contract firefighting crews that are often called on to assist with wildfires that have lower intensity and present a lower risk to firefighter safety

Type 3 Crews = Contingency resources, containing firefighters that are typically trained and called to action when other firefighting resources are running short

* = requires collaboration among levels of government and external parties

** = A "Strategic Shift" recommendation per the Abbott-Chapman Report

	Recommendation	Status	Action to date	Next steps
1.	Establish Indigenous Peoples as true partners and leaders in emergency management by including First Nations from the beginning and at all levels of planning, decision making and implementation.	Substantial Improvement	<p>Under the 2017 Emergency Management Services Agreement (bilateral agreement) with ISC, EMBC is working with First Nations on all phases of emergency management.</p> <p>EMBC regional offices have also been working with First Nations in their regions to assist with planning and training.</p> <p>Starting in June 2018, First Nations in B.C. were invited to attend and participate in partnership meetings located in their respective EMBC region. Each of these First Nations Emergency Management Partnership Tables has identified values, vision and mission statements. The meetings and governance of each partnership are community driven with agenda topics chosen by First Nations. Discussions at the Partnership Table meetings provide a space for better understanding of the roles and responsibilities for all emergency management partners. Partnership Tables in each of the six EMBC regions are complete for spring 2019.</p> <p>The Province and Canada have also entered into a Collaborative Emergency Management Agreement (CEMA) with the T̓silhqot̓in National Government, and funding has been provided to advance activities under this agreement.</p> <p>EMBC has also been assisting with the development of partnerships between local authorities and First Nations. A Central Coast Regional Emergency Management Partnership was established on December 17, 2018 between the Province, Nuxalk Nation and Central Coast Regional District.</p>	<p>A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.</p> <p>The Province will continue to review additional After Action Reports, including <i>Trial by Fire: Nadleh Whut'en and the Shovel Lake Fire</i>, <i>#TahltanStrong: Alkali Lake Fire 2018 Report</i>, the T̓silhqot̓in National Government's report on the 2017 wildfires: <i>The Fires Awakened Us</i>, and the FNHA Interior Region report: <i>With Us, Not For Us</i>.</p> <p>EMBC will continue to work with First Nations and leadership through all phases of emergency management, including work at the Partnership Tables.</p> <p>The Province and Canada will continue to work with the T̓silhqot̓in National Government to implement the CEMA.</p> <p>Additional partnerships between local authorities and First Nations are also being explored, with EMBC support.</p>

	Recommendation	Status	Action to date	Next steps
2.	Provide support to First Nations governments and communities to enhance their role and capacity through the development and, where necessary, adaptation of emergency plans which consider the impacts of potential changes in their internal governments.	Underway	<p>EMBC has published the Emergency Management Planning Toolkit for local authorities and First Nations, a self-guided toolkit to support communities who are creating or updating their all-hazard emergency management plans.</p> <p>EMBC participates in and contributes to community-level Hazard, Risk and Vulnerability Analysis (HRVA) processes. EMBC provides a HRVA tool to communities to assess their risks. This tool is currently being updated with the support of a working group which includes representatives from local authorities and First Nations.</p>	<p>EMBC Regional Managers will continue to engage with First Nations on a regular basis regarding their emergency management plans.</p> <p>EMBC will launch the new HRVA tool in 2019.</p> <p>ISC currently provides some project-based funding for emergency preparedness, including planning. Additionally, the Federal Budget 2019 includes additional funding to improve emergency management on-reserve.</p>
3.	Ensure emergency services available to First Nations are provided in a way that is comparable to other communities of similar size and location.	Substantial Improvement	<p>The bilateral service agreement between EMBC and ISC ensures that First Nations communities receive the same support as local authorities. The first two years of the bilateral agreement implementation has been completed, and has included training and enhanced coordination between First Nations and provincial agencies such as EMBC and the BCWS during emergency planning efforts.</p> <p>EMBC has published the Emergency Management Planning Toolkit for local authorities and First Nations, which is a self-guided toolkit to support communities who are creating or updating their all-hazard emergency management plan.</p> <p>Significant progress has been made by the BCWS to keep First Nations informed on topics such as: pre-season forecasts; fire season debriefings; the use of heavy equipment; and firefighting equipment caches in remote communities.</p>	A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.

	Recommendation	Status	Action to date	Next steps
4.	Governments recognize First Nations jurisdiction in their traditional territories and support capacity development through training and accreditation.	Substantial Improvement	<p>The first two years of the bilateral agreement implementation has been completed, and has included training (e.g., EMBC-sponsored emergency management training) and enhanced coordination between provincial agencies such as EMBC and the BCWS, and First Nations during emergency planning and preparedness efforts.</p> <p>The Province and Canada have also entered into a Collaborative Emergency Management Agreement (CEMA) with the Tšilhqot'in National Government, and funding has been provided to advance activities under this agreement.</p> <p>The BCWS has partnered with FNESS and ISC on a strategy to deliver training required for Type 2 and Type 3 firefighting crews. FNESS is leading this training this spring, supported by \$150,000 from the BCWS and \$95,000 from ISC.</p> <p>Enhanced communication to local authorities, provincial agencies, and other emergency management partners has also taken place, to confirm and clarify First Nations jurisdiction (e.g. with respect to evacuation orders and Band Council Resolutions).</p>	<p>A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.</p> <p>The Province continues to work with First Nations and leadership under the bilateral service agreement between EMBC and ISC.</p>

	Recommendation	Status	Action to date	Next steps
5.	Renegotiate existing Canada-B.C. bilateral agreements, including the 10-year Canada-B.C. Emergency Management Services Funding Agreement, to ensure inclusion of seamless and integrated support for First Nations communities, and determine a suitable timeframe to transition to a tri-partite agreement, including provisions for communities to self-determine how they will establish Emergency Operations Centres.	Further Analysis / Discussion Required	EMBC is engaging directly with communities to assess their experience under the bilateral agreement in order to explore additional opportunities to support First Nations governments and communities.	<p>A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.</p> <p>The Province will consider input from First Nations and leadership regarding their experience under the bilateral agreement, and explore opportunities for more tri-lateral partnership and governance with respect to emergency management.</p>
6.	Governments should commit the time and resources to finalizing and exercising the provisions of the Canada-B.C. Emergency Management Services Funding Agreement by spending the time required, with communities in their communities, to develop and sustain relationships.	Substantial Improvement	<p>EMBC continues to support the development and strengthening of partnerships through the EMBC Regional First Nations Emergency Management Partnership Tables (see Recommendation #1).</p> <p>In addition, EMBC and the BCWS regional staff will continue to regularly liaise with local First Nations to develop and sustain relationships. This includes outreach visits before, during and after emergency events, as well as assistance with emergency preparedness activities, such as planning and exercises.</p> <p>EMBC has developed a community profile database that will assist communities by identifying and addressing gaps in their emergency planning, and will capture interactions with communities that will assist in fostering and maintaining these important relationships.</p>	<p>EMBC and First Nations will continue to pursue a partnership approach to emergency management through the EMBC Regional First Nations Emergency Management Partnership Tables.</p> <p>Additional partnerships between local authorities and First Nations are being explored.</p>

	Recommendation	Status	Action to date	Next steps
7.	Develop an emergency management First Nations youth leadership program to foster leadership skills in emergency management for First Nations youth.	Underway	<p>The BCWS has been reaching out to First Nations through face-to-face meetings, to explain the application process for seasonal firefighter positions and to answer questions posed by potential recruits as well as employment coordinators and youth workers.</p> <p>In January 2018, EMBC began to update the Master of Disaster youth education program to ensure that it is flexible and culturally inclusive. The projected launch of the improved Master of Disaster program will occur in fall 2019.</p> <p>In February 2019, EMBC participated in the “Preparing our Home” gathering, which enables Indigenous youth to become emergency preparedness leaders in their communities. The gathering was led by the youth, for the youth and their communities. EMBC supported three sessions at the gathering, including: 1) an EMBC Indigenous Youth Intern sharing their personal experiences; 2) the significance of using traditional practices for emergency preparedness and cultural revitalization; and 3) using ancestral practices for leadership development training and relationship building.</p>	<p>The Province will continue to work with partners on opportunities to integrate First Nations youth into emergency management.</p> <p>EMBC, with First Nations involvement, is currently formally assessing opportunities to integrate First Nations youth into the EMBC Regional First Nations Emergency Management Partnership Tables (see Recommendation #1).</p>
8.	Establish a First Nations Health Authority senior executive role at the Health Emergency Management BC (HEMBC) table to ensure First Nations interests are represented.	Complete	FNHA is a member of HEMBC’s Executive Steering Committee, ensuring that First Nations interests are represented at the decision-making level of health system emergency management in B.C.	The success of the health sector in addressing First Nations interests during emergency events will be assessed on an ongoing basis and with a view to continual improvement.

	Recommendation	Status	Action to date	Next steps
9.	Governments build cultural sensitivity training and awareness of racism and discrimination into emergency management plans.	Substantial Improvement	<p>All BCWS staff members are working now to implement FLNRORD's Learning for Reconciliation strategy. In spring 2019, zone Wildfire Officers will contact local First Nations to set up cross-cultural training provided by an Indigenous service provider.</p> <p>EMBC has also begun to implement the Learning for Reconciliation strategy within the organization to improve cultural sensitivity training and awareness.</p> <p>Cultural sensitivity and Indigenous reconciliation training is accessible to all provincial government staff.</p> <p>The Province continues to use the policy assessment tool Gender Based-Analysis Plus (GBA+) as a guiding practice within emergency management and across government. This tool requires specific assessment of cultural sensitivity for all new policy proposals.</p> <p>ISC has contracted Cultural Safety Workshops for all staff and executives in BC Region. Additionally, the BC Federal Council (comprised of senior federal officials), the federal Indigenous Interests and Issues Committee (IIIC) and the Canada School of Public Service are collaborating to deliver a range of training and learning opportunities to enhance cultural competence and safety.</p>	<p>The Province will continue to pursue enhanced cultural sensitivity among employees, volunteers, and other partners through training and education.</p> <p>The federal government's BC Federal Council (comprised of senior federal officials in B.C.) is continuing to work with a range of Indigenous academics and knowledge keepers to expand cultural learning opportunities.</p> <p>The Province is currently considering funding options to support cultural agility/cultural safety training for emergency management practitioners and volunteers.</p>
10.	Develop an online system with text and audio of names of all First Nations communities in BC, both in English and Indigenous languages.	Complete	A phonetic pronunciation guide has been produced and is available to employees.	The creation of a repository of audio and text files for use by provincial staff, partners, and the public is being assessed.
11.	Develop a toolkit for Indigenous communities and rural and remote communities to assist during emergencies.	Complete	EMBC developed and delivered a toolkit regarding First Nations emergency management in July 2017. The toolkit has since been updated and is being delivered to First Nations.	The toolkit will continue to be updated and distributed to First Nations on an ongoing basis.

	Recommendation	Status	Action to date	Next steps
12.	All Indigenous and non-Indigenous governments should ensure they have common understanding of roles, responsibilities and procedures in the event of an emergency.	Substantial Improvement	<p>Starting in June 2018, First Nations in B.C. were invited to attend and participate in Partnership Table meetings located in their respective EMBC region. Each of these First Nations Emergency Management Partnership Tables has identified values, vision and mission statements. The meetings and governance of each partnership are community driven with agenda topics chosen by First Nations. Discussions at the partnership meetings provide a space of better understanding of the roles and responsibilities of all emergency management partners. Partnership Tables in each of the six EMBC regions are complete for spring 2019.</p> <p>EMBC and the BC Oil and Gas Commission have worked together to develop and facilitate cross-sector First Nations Emergency Management Training sessions. One such session was conducted in Fort St John from November 7-9th, 2018, and another session is scheduled in Prince George in spring 2019. The format includes a one day classroom introduction to Emergency Management (the Core), and a second day series of tabletop/scenario-based exercises facilitated by a First Nations emergency management expert. All sessions have a First Nations focus.</p> <p>A Central Coast Regional Emergency Management Partnership was established on December 17, 2018 between the Province, Nuxalk Nation and Central Coast Regional District.</p>	<p>A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.</p> <p>EMBC is encouraging partnerships between local authorities and First Nations.</p> <p>EMBC and First Nations will continue to pursue a partnership approach to emergency management through the EMBC Regional First Nations Emergency Management Partnership Tables.</p> <p>In spring 2019, EMBC and the BCWS will be providing a short guidance document to assist local authorities and First Nations to better understand roles and responsibilities as well as communications flows between the BCWS Provincial Wildfire Coordination Centres (PWCC), Regional Wildfire Coordination Centres (RWCC), EMBC Provincial Emergency Coordination Centre (PECC), Provincial Regional Emergency Operations Centres (PREOCs) and communities before, during and after wildfire events.</p>

	Recommendation	Status	Action to date	Next steps
13.	Strengthen and support the mandate of the First Nations' Emergency Services Society (FNESS) to advise and guide provincial emergency services policy and delivery.	Underway	<p>FNESS is engaged in working with, advising and guiding emergency services work for many First Nations. EMBC and the BCWS work closely with FNESS. EMBC has contracted FNESS to facilitate the EMBC Regional First Nations Emergency Management Partnership Tables.</p> <p>FLNRORD has contracted with FNESS and is working in partnership with EMBC to deliver a dialogue session in 2019 to initiate the process of braiding Indigenous and non-Indigenous ways of knowing in relation to emergency management.</p>	A tripartite emergency management MOU between BC, ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management. This agreement commits parties to strengthening and clarifying FNESS's roles and responsibilities with respect to emergency management.
14.	First Nations Health Authority and regional health authorities work collaboratively towards a seamless emergency response system that defines roles, responsibilities and procedures.	Complete	HEMBC partnered with all B.C. regional Health Authorities and FNHA following the 2017 wildfire season to develop the BC Health System Wildfire Response Plan. This plan defines roles, responsibilities, and procedures for coordinating emergency response efforts across the health system and was activated during the 2018 B.C. wildfire season.	The BC Health System Wildfire Response Plan will be updated as required based on emerging lessons-learned, including those resulting from the BC Health System Wildfire 2018 After Action Report.
15.	Create a volunteer training requirement, as part of Emergency Social Services, to participate in cultural awareness.	Underway	Emergency Support Services (ESS) Mobile Support Teams (MSTs) completed basic Cultural Safety training at the MST conference in Chilliwack in the fall of 2018. EMBC is currently exploring opportunities to provide MSTs and additional Public Safety Lifeline Volunteers more in-depth cultural safety training that is specific to ESS.	<p>EMBC will continue to pursue opportunities to integrate cultural safety training into MST and ESS training programs.</p> <p>The Province is currently considering funding options to support cultural agility/cultural safety training for emergency management practitioners and volunteers.</p>

	Recommendation	Status	Action to date	Next steps
16.	Review and assess the decision-making process related to the establishment of evacuation alerts and orders. Ensure the process considers whether highway corridors should be exempt from the order, has provisions to recognize ranching or farming operations located within an evacuation area, and other local considerations as required.	Complete	EMBC and the BCWS are working with provincial ministries, FNHA, FNESS, RCMP, ISC, and PSC to update the provincial Evacuation Operational Guidelines. First Nations and local authorities have been engaged during the project.	EMBC will distribute updated Evacuation Operational Guidelines in spring 2019. EMBC will continue to engage with emergency management partners to gather feedback on the updated Evacuation Operational Guidelines, and continue to update them where appropriate.
17.	Review and assess the decision-making process related to lifting evacuation orders. Ensure the process includes coordination with the First Nations Health Authority (FNHA), regional health authorities, Ministry of Transportation and Infrastructure, and the RCMP.	Complete	EMBC and the BCWS are working with provincial ministries, FNHA, FNESS, RCMP, ISC, and PSC to update the provincial Evacuation Operational Guidelines. First Nations and local authorities have been engaged during the project.	EMBC will distribute updated Evacuation Operational Guidelines in spring 2019. EMBC will continue to engage with emergency management partners to gather feedback on the updated Evacuation Operational Guidelines, and continue to update them where appropriate.

	Recommendation	Status	Action to date	Next steps
18.	Develop strategic partnerships and operational agreements with key community members, forest professionals, First Nations, tenure holders (forest, range, guide outfitters and others), as suitable to provide increased response capacity and promote resilience across the land base. As part of this arrangement, B.C. should consider training and registering partners.**	Substantial Improvement	<p>The BCWS has partnered with FNESS and ISC on a strategy to deliver training required for Type 2 and Type 3 firefighting crews. FNESS is leading this training this spring, supported by \$150,000 from the BCWS and \$95,000 from ISC.</p> <p>The BCWS has established a training program for structural firefighters who respond to wildfire incidents. This training will be delivered through 2019. Work includes over 50 wildfire training sessions for fire departments throughout B.C. and will be led by Structural Protection Specialists.</p> <p>The BCWS is establishing an agreement with the B.C. Community Forest Association and the Federation of B.C. Woodlot Associations that outlines how these organizations will work together in the 4 phases of emergency management and promotes resilient forest stands.</p> <p>Substantial progress was made with key stakeholders in advance of 2018 fire season that raised response capacity and coordination. The BCWS has continued to build on work begun in 2018. For example, the BCWS has developed standardized protocols and procedures for engaging industry to provide equipment and resources to assist with firefighting as needs dictate. The process was developed and tested in the Cariboo Fire Centre and is being rolled out to all other Fire Centres over the next two years.</p> <p>In partnership with the Fraser Basin Council, the BCWS is holding community wildfire roundtables in communities facing a high wildfire risk. This \$300,000 program will be delivered over the next two years.</p> <p>The BCWS is providing \$400,000 to the Association of BC Forest Professionals to develop fire-related professional development sessions, which will provide guidance on the use of fire and management of fire risk when planning forestry operations.</p>	The BCWS will continue to formalize mechanisms and standardize agreements to increase partnership opportunities.

	Recommendation	Status	Action to date	Next steps
19.	Provide support to local and First Nations governments in self-assessing their emergency plans (for completeness and effectiveness) and each community's ability to implement those plans fully and effectively.	Underway	<p>To help First Nations prepare and better adapt to the threats of climate change, the 2019 Federal Budget announced \$211 million over five years, starting in 2019-20, to support increased resiliency and emergency management on-reserve.</p> <p>EMBC has published the Emergency Management Planning Toolkit for local authorities and First Nations, a self-guided toolkit to support communities who are creating or updating their all-hazard emergency management plan.</p> <p>EMBC participates in and contributes to community-level Hazard, Risk and Vulnerability Analysis (HRVA) processes. EMBC provides a HRVA tool to communities to assess their risks. This tool is currently being updated with the support of a working group which includes representatives from local authorities and First Nations.</p> <p>EMBC has developed a community profile database that will assist communities by identifying and addressing gaps in their emergency planning, and will capture interactions with communities that will assist in fostering and maintaining these important relationships.</p> <p>EMBC Regional Managers support local and First Nations governments on a regular basis regarding assessment of their emergency management plans.</p>	<p>The Province will work with First Nations, FNESS, the FNLC and ISC towards continuous improvement in planning and developing increased capacity.</p> <p>EMBC will launch the new HRVA tool in 2019.</p>

	Recommendation	Status	Action to date	Next steps
20.	B.C., First Nations, local governments and emergency responders develop jurisdictional protocols, agreements and undertake annual tabletop exercises to ensure roles and procedures are fully understood.	Underway	<p>Through the bilateral agreement, First Nations have been further integrated into local authority and provincial emergency management exercises.</p> <p>Central Coast Regional Emergency Management Partnership was established on December 17, 2018 between the Province, Nuxalk Nation and Central Coast Regional District.</p> <p>B.C. and Canada have also entered into a Collaborative Emergency Management Agreement (CEMA) with the T̓silhqot'in National Government, and funding has been provided to advance activities under this agreement.</p> <p>EMBC and the BC Oil and Gas Commission have worked together to develop and facilitate cross-sector First Nations Emergency Management Training sessions. One such session was conducted in Fort St John from November 7-9th, 2018, and another session is scheduled in Prince George in spring 2019. The format includes a one day classroom introduction to Emergency Management (the Core), and a second day series of tabletop/scenario-based exercises facilitated by a First Nations emergency management expert. All sessions have a First Nations focus.</p> <p>Templates for First Nations led training events such as tabletop exercises and workshops are being developed, and EMBC's Regional Offices have assisted with the delivery of exercises directly with First Nations.</p>	A tripartite emergency management MOU between B.C., ISC, and FNLC/FNESS has recently been signed that recognizes First Nations as full partners in both the governance and operations of emergency management.

	Recommendation	Status	Action to date	Next steps
21.	B.C. Wildfire Service designs a preferred contractor procurement model to be offered as an option to standing offer participants.	Complete	<p>The BCWS's policy is to exhaust all qualified B.C. personnel first prior to securing external resources. Selection of qualified suppliers is made based on operational requirements, including geographic proximity, availability, certification, and safety requirements and in consideration of forecasted need over several operational periods.</p> <p>The BCWS has improved the existing procurement processes to increase the potential use of local or B.C. resources. Improvements include: standardizing and modernizing contract language, developing new Standing Offers, engaging with stakeholders and providers to raise awareness of contracting opportunities and procedures, expanding the use of BC Bid and streamlining the process to submit qualifications to be considered for inclusion on qualified suppliers/bidders lists. The intent of these changes is to increase the number and depth of qualified suppliers throughout the province prior to need.</p> <p>In partnership with the Western Forestry Contractors' Association, the BCWS has formed a contract advisory committee to co-operatively develop procurement processes and allow it to work more effectively with the contracting community.</p>	Improved procurement processes are in place for the 2019 wildfire season, and will be evaluated and improved further as required.

	Recommendation	Status	Action to date	Next steps
22.	Develop a partners' program where, prior to wildfires, local resources are assigned to containment line teams consisting of heavy equipment, forest professionals, technicians and workers who use their local knowledge and expertise to establish containment lines as part of tactical operations.	Complete	<p>The BCWS's policy is to exhaust all qualified B.C. personnel first prior to securing external resources. Selection of qualified suppliers is made based on operational requirements, including geographic proximity, availability, certification, and safety requirements and in consideration of forecasted need over several operational periods.</p> <p>The BCWS has improved the existing procurement processes to increase the potential use of local or B.C. resources. Improvements include: standardizing and modernizing contract language, developing new Standing Offers, engaging with stakeholders and providers to raise awareness of contracting opportunities and procedures, expanding the use of BC Bid and streamlining the process to submit qualifications to be considered for inclusion on qualified suppliers/bidders lists. The intent of these changes is to increase the number and depth of qualified suppliers throughout the province prior to need.</p>	<p>Improved procurement processes are in place for the 2019 wildfire season, and will be evaluated and improved further as required.</p> <p>The BCWS has re-started the joint Forest Industry BCWS Working Group to continue to build on the relationship with this key partner and are establishing the equipment strike team model in many parts of B.C. to bring local expertise and knowledge into fire suppression operations.</p> <p>For 2019, the BCWS has initiated consistent Industry Engagement Workshops in preparation for the 2019 wildfire season. One objective of these workshops is to further increase the effectiveness of containment teams through industry contribution to firefighting efforts.</p>

	Recommendation	Status	Action to date	Next steps
23.	Create a roles and responsibility framework with the flexibility to adapt to each unique emergency situation. The framework must clearly define the primary, secondary and tertiary responsibilities for each organization in the event of disaster and be immediately operational. Encourage the integration of local and First Nations knowledge in the framework, and support the opportunity for communities to contribute to fire suppression operations.	Underway	The Province's approach to emergency management is guided by the BC Emergency Management System, and the structure used to manage emergencies is provided within Comprehensive Emergency Management Plan (CEMP). The base plan is the BC All Hazard Plan, which outlines the provincial concept of operations as well as the roles and responsibilities that are applicable in all emergencies or disasters. Support annexes are hazard specific documents that detail functional aspects of emergency management. More analysis of hazard specific roles and responsibilities is required. The CEMP and support annexes are living documents.	<p>EMBC and the BCWS will be assessing how Indigenous knowledge can best be incorporated into emergency management planning processes in a manner that is respectful and advances reconciliation.</p> <p>The BCWS will continue to use First Nations liaison contractors in fire centres to provide advice and traditional knowledge, employ local foresters for line location and local area knowledge, as well as train and employ First Nations emergency fire fighter crews.</p> <p>A provincial initiative is currently under development which will develop policies, with First Nations involvement, regarding use of traditional knowledge in the natural resources sector and in emergency management.</p>

	Recommendation	Status	Action to date	Next steps
24.	Establish emergency centres of excellence in Interior locations to support largescale disaster response.**	Alternate Approach Used	<p>Due to the diversity of emergency events that may lead to evacuations in British Columbia, and uncertainties regarding which communities may need to be evacuated, and to where, investing in the robustness of the provincial Emergency Support Services (ESS) Program (including planning, training, systems, etc.) represents a flexible and effective use of available resources in most cases. However, a variety of mass care strategies will continue to be considered as potential methods to enhance the overall provincial ESS Program and the resilience of communities in the face of hazards such as wildfires.</p> <p>Individual communities may also wish to assess specific local needs in cooperation with the Province. For example, under the Rural Dividend Program, Nadleh Whut'en First Nation has been provided funding to conduct a feasibility study and initial planning for an emergency centre of excellence.</p> <p>Under the CEMA, the T̓silhqot'in National Government has also been provided with funding to conduct a feasibility study for an emergency centre of excellence.</p>	The T̓silhqot'in National Government's report on the 2017 wildfires – <i>The Fires Awakened Us</i> – includes additional details into what may be required to establish an emergency centre of excellence. The Province will continue to review this and other reports that provide similar insights into what communities may require to support largescale disaster response.

	Recommendation	Status	Action to date	Next steps
25.	B.C. establish annual, intergovernmental preparedness workshops with First Nations and local governments to support consistent understanding of emergency operations, roles and responsibilities. • Ensure workshops are held in local communities • Consider and plan for the impact of multijurisdictional emergency events • Provide consistent training • Ensure egress (evacuation) routes are established and that the status of alternate roads is known.	Substantial Improvement	<p>In 2019, 60 communities were provided up to \$25,000 in funding for evacuation route planning as part of the UBCM Community Emergency Preparedness Fund applications.</p> <p>EMBC and ministry partners host seasonal workshops to bring the partners together and touch on some of these issues. Workshops are being restructured to provide more interaction and ability to interact one-on-one with experts.</p> <p>As noted in Recommendation #1, First Nations in B.C. were invited to attend and participate in Partnership Table meetings located in their respective EMBC region. Each of these First Nations Emergency Management Partnership Tables has identified values, vision and mission statements, while also providing an opportunity to discuss emergency operations as well as roles and responsibilities between a number of emergency management partners.</p> <p>As part of the commitment to further engagement and to support preparedness activities for the upcoming 2019 fire season, the BCWS has scheduled over 250 dedicated engagement sessions with a broad range of partners including First Nations, local authorities, contract crews, agricultural industry representatives, forest industry representatives and others. These engagements encompass activities related to prevention, training, contract services, and readiness.</p> <p>Emergency management training is being expanded with tailored serials delivered within communities.</p> <p>In partnership with the Fraser Basin Council, the BCWS is holding community wildfire roundtables in communities facing a high wildfire risk. This \$300,000 program will be delivered over the next two years.</p>	EMBC will continue to work with the BCWS and across government to improve the delivery and content of seasonal preparedness workshops.

	Recommendation	Status	Action to date	Next steps
26.	Deliver annual emergency management forums that: • Bring together BC, First Nations and local governments and partners • Identify provincial operational and policy gaps • Promote shared information and learning, through best practices and success stories • Evaluate progress against the B.C. Flood and Wildfire Review final report, Addressing the New Normal: 21st Century Disaster Management in British Columbia.	Substantial Improvement	<p>After Action Reviews are conducted after each significant event.</p> <p>Following the 2018 events, EMBC issued a survey to B.C. local authority and First Nations Emergency Operations Centres (EOCs) to gather feedback on a variety of topics, including: education/training; preparedness; communication, information & collaboration; deployment processes and procedures; recovery; and overall assessments. While the participation rate was not high (42 of 393 potential EOCs responded), important feedback was obtained to validate new approaches and to prioritize additional items for improvement.</p> <p>Seasonal workshops bring emergency management partners together and touch on some of these activities.</p> <p>Seasonal workshops have provided a forum for communities to share information, best practices, successes and areas of improvement.</p> <p>EMBC continues to identify and address areas of improvement and has implemented significant improvements in 2018 from the lessons of 2017.</p>	B.C. continues to support a culture of continuous improvement based on a regular dialogue with all emergency management practitioners to share lessons learned from each significant emergency event.
27.	Ensure compensation mechanisms exist for residents who support evacuees by providing shelter for people and/or livestock.	Complete	<p>Guidelines are in place for billeting and clear policy direction has been established for hosting evacuees from other communities.</p> <p>Compensation is available, and was provided in 2018, for individuals and organizations providing shelter and feed for evacuated livestock.</p>	

	Recommendation	Status	Action to date	Next steps
28.	Indigenous and non-Indigenous communities establish mutual aid agreements to optimize resource-sharing in the areas of operational response and volunteer capacity.	Underway	<p>Local authorities and First Nations are empowered to enter into agreements with their neighboring jurisdictions.</p> <p>UBCM has made available a new round of funding for the Regional Community to Community Forum program for events in 2019 and 2020. This program pays up to 50% of meeting costs for local authorities and First Nations elected officials and/or senior staff to meet and discuss any topic they decide on.</p> <p>Central Coast Regional Emergency Management Partnership was established on December 17, 2018 between the Province, Nuxalk Nation and Central Coast Regional District.</p>	Under EMBC leadership, additional partnerships between local authorities and First Nations continue to be explored. These partnerships may include mutual aid agreements.
29.	B.C. enhance integration across government and among governments, particularly in the natural resource sector and within Emergency Management BC, to: • Foster better collaboration among land-based decision makers • Promote joint forest/grassland management and wildfire preparedness.	Substantial Improvement	<p>In 2018, FLNRORD implemented new integration mechanisms. All Hazards Incident Management Teams deal with integration at the site level and the joint Hazard Management Teams integrate management of hazards across ministry and provincial natural resource sector agencies. New engagement standard operating procedures have been established for enhanced collaboration with stakeholders, First Nations, local communities, and other partners.</p> <p>The BCWS is providing \$400,000 to the Association of BC Forest Professionals to develop fire-related professional development sessions, which will provide guidance on the use of fire and management of fire risk when planning forestry operations.</p>	<p>Provincial agencies will continue to enhance integration, and will be responsive to outcomes of future After Action Reviews.</p> <p>In spring 2019, EMBC and the BCWS will be providing a short guidance document to assist local authorities and First Nations to better understand roles and responsibilities as well as communications flows between the BCWS Provincial Wildfire Coordination Centres (PWCC), Regional Wildfire Coordination Centres (RWCC), EMBC Provincial Emergency Coordination Centre (PECC), Provincial Regional Emergency Operations Centres (PREOCs) and communities before, during and after wildfire events.</p>

	Recommendation	Status	Action to date	Next steps
30.	The Ministry of Health, in partnership with the First Nations Health Authority and regional health authorities, create a provincial primary health care response team that works in crisis zones and evacuation areas.	Further Analysis / Discussion Required	The health system is continuing to update its procedures regarding the provision of primary care to evacuees outside of evacuation order areas (e.g. at Reception Centres and Group Lodging).	The viability of developing a primary health care response team that works in, or travels through, areas under evacuation order to provide services is currently being assessed.
31.	Establish pathways for collaboration with First Nations to enable the integration of traditional ecological knowledge with Western science. Ensure risk modelling is built upon a greater understanding of the land base, values and practices of First Nations.	Underway	A provincial initiative is currently under development which will develop policies, with First Nations involvement, regarding use of traditional knowledge in the natural resources sector.	Planning with First Nation communities through the Community Resilience Investment program, Community Wildfire Protection Plans and FLNRORD fuel management plans will work to incorporate local Indigenous knowledge when identifying opportunities for prescribed fire and other fuel management activities in consideration of values at risk on the landscape.

	Recommendation	Status	Action to date	Next steps
32.	Canada and/or B.C. equip First Nations communities and rural and remote communities so they can respond to wildfires through training and development of equipment caches.	Substantial Improvement	<p>The BCWS has partnered with FNESS and ISC on a strategy to deliver training required for Type 2 and Type 3 firefighting crews. FNESS is leading this training this spring, supported by \$150,000 from the BCWS and \$95,000 from ISC.</p> <p>The BCWS and the OFC are working on an expanded structure protection program, which will provide additional resources in rural and wildland-urban interface areas. The program expansion will standardize and increase the capability of Type 1 trailers by increase the available pumps from 8 to 20, enhance the training program for structural fire fighters, and develop and implement a “Train-the-Trainer” program to improve training delivery options for structural fire fighters. Work includes over 50 wildfire training sessions for fire departments throughout B.C. and will be led by Structural Protection Specialists.</p> <p>FNESS is currently providing firefighting training in four communities with ISC funding this year.</p>	<p>The Province will continue to work with Canada, First Nations, and rural/remote communities to identify opportunities to enhance local capacity.</p> <p>The BCWS is also working on a grant transfer to FNESS that would see FNESS build an inventory of crews, training, and gaps. This will be followed by training to address the gaps and maintain certifications in order to build more Type 2 crews.</p> <p>In addition to further investments to support increased resiliency and emergency management on-reserve, the Federal Budget 2019 announced the intention to expand the FireSmart program on-reserve.</p> <p>The BCWS will continue to meet regularly with Indigenous communities to discuss communications, firefighter recruitment opportunities and contract opportunities.</p>
33.	Through B.C. Bid, B.C. leverage economies of scale to provide a lower-cost opportunity for residents and communities to purchase external sprinkler systems for their homes.	Alternate Approach Used	<p>BC Bid is used to address the procurement needs of public sector entities.</p> <p>Through the 100% funded Community Resiliency Investment program initiative, applications may be considered for communities to purchase additional sprinklers as treatment options.</p>	FLNRORD and the OFC will continue to work with communities on appropriate options to enhance structure protection for interface fire events.

	Recommendation	Status	Action to date	Next steps
34.	Canada provide ongoing funding to on-reserve volunteer fire departments to cover annual operating costs associated with the purchase and maintenance of capital infrastructure and equipment. Canada to establish an ongoing program to fund administration and training for volunteer fire departments to assist with wildland urban interface response.	Further Analysis / Discussion Required	To help First Nations prepare and better adapt to the threats of climate change, the 2019 Federal Budget announced \$211 million over five years, starting in 2019-20, to support increased resiliency and emergency management on-reserve.	In addition to additional investments to support increased resiliency and emergency management on-reserve, the Federal Budget 2019 announced the intention to expand the FireSmart program on-reserve as well as the establishment of an Indigenous Fire Marshal Office. This would be a First Nations-led institution that would promote fire safety and prevention, establish standards, support training, provide subject matter expertise, undertake public education, and establish programs and services including Wildland Urban Interface response.
35.	B.C. provide ongoing funding to volunteer fire departments to assist with wildland urban interface response. Funding provided to cover annual operating costs associated with the purchase and maintenance of capital infrastructure and equipment, as well as training for that purpose. B.C. to consider the Insurance Premium Tax as a funding source.	Further Analysis / Discussion Required	Funding for local structural fire protection is a local responsibility. No plans are currently in place to fund local structure protection through the Insurance Premium Tax.	The OFC and the BCWS have established a training program for structural firefighters who respond to wildfire incidents and in spring 2019 there will be over 50 wildfire training sessions for fire departments throughout B.C. led by Structural Protection Specialists. Training suitable for non-firefighters has also been created and funding is being sought for this type of training.

	Recommendation	Status	Action to date	Next steps
36.	B.C. review and clarify roles and responsibilities for flood management, specifically the transfer of responsibility from provincial to local governments, including through the amendment of the Emergency Program Act, The B.C. Flood Response Plan, and other applicable statutes and regulations.**	Underway	In May 2018, the BC Flood Response Plan was updated internally to reflect 2017 freshet experiences and lessons. A further update to reflect lessons from 2018 is planned for spring 2019.	The BC Flood Risk Strategy, currently under development, will review roles and responsibilities, and will examine the current governance model.
37.	Review operating plans for the Okanagan Lake Regulation System and Nicola Lake, and any other provincially owned and managed water management infrastructure, and adapt these plans to explicitly include consideration of uncertainty in streamflow forecasts.	Complete	The River Forecast Centre continues to improve the calibration of the Okanagan inflow forecast model for better estimation of seasonal runoff volume. This is an ongoing process that is revisited annually.	
38.	Re-evaluate all 200-year return-period flood elevations in BC, as well as all associated flood construction levels and horizontal setbacks.	Substantial Improvement	<p>20 B.C. communities are currently in the process of re-evaluating flood elevations. The outcomes of these evaluations will feed into future province-wide evaluations.</p> <p>The Province is also in the process of assessing climate change as it applies to natural hazards such as flooding.</p> <p>Through the National Disaster Mitigation Program, Community Emergency Preparedness Fund, and other EMBC funds, the Province has funded many flood mapping studies that help communities gain a better understanding of their 200-yr flood elevations.</p>	The Province will continue work on a BC Flood Risk Strategy, and will continue to work with communities to identify funding opportunities for flood elevation assessment work.

	Recommendation	Status	Action to date	Next steps
39.	Ensure streamflow forecast data provide sufficient accuracy and precision to manage flooding in BC. Assess and evaluate the adequacy of data networks, including snow, weather, streamflow, groundwater level and lake level, used to provide information to run provincial streamflow forecasting models.	Underway	<p>The River Forecast Centre has evaluated streamflow forecast accuracy and has initiated projects to improve streamflow forecast accuracy and communications.</p> <p>The River Forecast Centre has ongoing partnerships with the provincial snow monitoring program and Environment and Climate Change Canada to identify snow monitoring and weather forecast needs for flood forecasting, and optimize the use of current resources.</p>	The Province will assess opportunities to further invest in snow monitoring network expansions.
40.	Evaluate and upgrade the models used by the B.C. River Forecast Centre for forecasting streamflow and flooding: <ul style="list-style-type: none"> Develop backup models for use when any of the required model input data is missing Increase the frequency at which models are run Investigate the utility of including weather forecasts in models Regularly review and update models. 	Substantial Improvement	<p>The River Forecast Centre is updating the methods used to calculate snow basin indices, which includes incorporating more snow information and changing the algorithms related to the location of the snow to produce more accurate results.</p> <p>The number of gauges installed on the mid-Fraser river is anticipated to grow from 5 to 23, and the River Forecast Centre also will continue to work with partners to identify where new flood gauges can be installed.</p>	The River Forecast Centre will continue to assess opportunities to improve these models, and will continue to coordinate with partners to identify areas where new gauges may be installed.

	Recommendation	Status	Action to date	Next steps
41.	Build and provide sustained funding for a coordinated environmental data hub that organizes and disseminates information from the many data networks currently operating in BC. Provide equal access to information for Indigenous and non-Indigenous communities.	Underway	In 2018, the Common Operating Picture consolidated information on freshet from a number of sources and was available to local authorities and First Nations. Efforts are underway to consolidate additional wildfire information in a similar fashion. Opportunities to improve the accuracy and availability of snow and hydrometric monitoring data are also constantly being assessed by the Knowledge Management Branch within the Ministry Environment and Climate Change Strategy.	<p>EMBC, FLNRORD, and GeoBC have been leading the development of a public-facing emergency management portal to provide a more interactive platform of information that consolidates provincial data sources relevant to flooding and wildfire events. This product is expected to be released in spring/summer 2019.</p> <p>Provincial agencies will continue to improve the accessibility of environmental data for use by emergency management partners.</p>

	Recommendation	Status	Action to date	Next steps
42.	Develop values and risk modelling tools to support decision making and advance planning: • Invest in generating quality data to support modelling, through the use of LiDAR, inclusion of Indigenous knowledge and recognition of cumulative effects • Invest in ongoing training for users • Ensure common data collection and provide access to the system for all users • Effective monitoring of snowpack.	Underway	<p>In 2018, the Common Operating Picture consolidated information on freshet from a number of sources and was available to authorities and First Nations.</p> <p>Training was provided to flood assessors and observers on the Common Operating Picture.</p> <p>Ministries also increased surveillance of the snowpack with additional flights, and captured orthoimagery of the high water levels to better inform flood planning.</p> <p>The Knowledge Management Branch within the Ministry of Environment and Climate Change Strategy has been developing a number of data visualization and data sharing tools using open data and corporate tools to make network information freely available to all users.</p>	<p>Provincial agencies will continue to improve data access and the accessibility of decision support tools for use by emergency management partners.</p> <p>EMBC and the BCWS will be assessing how Indigenous knowledge can best be incorporated into emergency management planning processes in a manner that is respectful and advances reconciliation.</p> <p>The BCWS will continue to use First Nations liaison contractors in fire centres to provide advice and traditional knowledge, employ local foresters for line location and local area knowledge, as well as train and employ First Nations emergency firefighter crews.</p>

	Recommendation	Status	Action to date	Next steps
43.	Identify and assess new equipment, machinery and their configurations that might strengthen ongoing land-based resource management, including emergency planning, prevention, response and recovery.	Underway	<p>In 2018, the BCWS tested large water delivery systems and drone technologies. Testing will continue into 2019.</p> <p>In March 2019, the BCWS hosted an Innovation Symposium. This was a dedicated forum for providers to communicate information on new technologies.</p> <p>The BCWS is working to gain access to external product testing capacity for the upcoming season and beyond, which will provide the BCWS with access to learnings from tests and research that has already been completed in other jurisdictions.</p> <p>The integration of helicopters and fixed-wing aircraft has been improved to maximize efficiency. Firefighting aircraft contracts will be longer in 2019. For example, the availability period for the "Fire Boss" skimmer aircraft group (consisting of four Air Tractor "Fire Boss" airtankers and one Cessna Grand Caravan bird dog) has been increased from 100 to 120 days.</p>	<p>The BCWS will evaluate new technologies presented at the Innovation Symposium and determine which products, if any, can be tested as part of the 2019 or 2020 fire seasons.</p> <p>The BCWS will be piloting the use of night vision goggles to use in early detection and prioritization of response in the 2019 season. This technology is beneficial following lightning events in interface areas to assist with earlier detection and response.</p> <p>The BCWS staff will be given increased access to technology, including tablet computers/iPads in the field and unmanned aerial vehicles (drones) to assist with fire mapping and infrared scanning.</p> <p>The BCWS is developing an "ideas portal" that will allow staff, vendors and the public to submit proposals and ideas on ways for the BCWS to improve its business processes, products and technologies.</p>
44.	Evaluate the capacity of provincially owned water management infrastructure to pass flows and modify the infrastructure as needed to keep it functioning as intended.	Complete	<p>Capacity evaluations are part of ongoing work.</p> <p>The Okanagan Lake Regulatory system is owned by the Province and operated by FLNRORD.</p> <p>FLNRORD maintains and operates it to maximize efficiency, and closely monitors its operation.</p>	The Province will continue to evaluate flows to optimize the system and reduce flood risk.

	Recommendation	Status	Action to date	Next steps
45.	Governments at all levels annually review and monitor drainage infrastructure to ensure its adequacy in an extreme weather event, such as high-intensity rain.	Underway	FLNRORD monitors forest road infrastructure and the Ministry of Transportation and Infrastructure monitors highway infrastructure as part of their regular operations. Information is shared between the entities when necessary.	This is ongoing and crosses multiple jurisdictions and responsibility areas.
46.	Strengthen public understanding of the risks and personal responsibilities associated with living in a fire-dependent ecosystem. Provide a summary of incentives to encourage public participation in emergency preparedness behaviour and provide information on government responses during emergency situations.	Substantial Improvement	<p>A new BC FireSmart website has been launched that includes information for the public on how to better participate in wildfire risk identification and reduction.</p> <p>The BCWS has released the FireSmart BC Education Package to be used in schools from K-12. This package complements the existing Master of Disaster curriculum materials developed by EMBC and the Ministry of Education.</p> <p>FLNRORD continues to support the development of research and information on hazard risk through the efforts of the Climate Change Secretariat and in relation to the Climate Change Audit.</p> <p>EMBC launched the PreparedBC Facebook page in April, 2019.</p>	<p>Provincial agencies will continue to mature public education initiatives related to emergency management.</p> <p>Provincial agencies will continue to work together to gather data and information that can be made available to support efforts to identify hazard risks.</p> <p>The BCWS is assessing new public communications strategies for 2019 and beyond.</p> <p>Public engagement on climate change adaptation and risks (including wildfire) is planned for 2019. A climate change adaptation strategy is planned for 2020.</p>

	Recommendation	Status	Action to date	Next steps
47.	Build a central hub or 'one stop shop' emergency communications website to provide the public with reliable, responsive, adaptive, real-time and customer-focused information. This hub should collect information from provincial departments and agencies, First Nations and local governments and relevant stakeholder agencies, including media. It should also provide emergency updates for evacuees and include citizen information on how to assist, volunteer or donate.**	Complete	The Emergency Info BC blog has been updated to serve as a hub for disaster information, from evacuation alerts and orders to response and recovery resources. New information/features include: interactive maps of evacuation alerts and orders; location/hours of ESS reception centres; travel/visitor information; safety and preparedness tips; information on how to donate and advice for returning home. The @emergencyinfobc Twitter feed has also been freed up to provide more value-added and themed information.	<p>EMBC, FLNRORD, and GeoBC have been leading the development of a public-facing emergency management portal to provide a more interactive platform of information that consolidates provincial data sources relevant to flooding and wildfire events. This product is expected to be released in spring/summer 2019.</p> <p>The Province will continue to invest in the provision of timely, consolidated emergency information for the public and emergency managers.</p> <p>The Province will also engage the tourism industry to ensure that emergency communications and strategies adequately account for tourism and visitor considerations.</p>
48.	Create a communicators' toolkit for use during emergencies with specific resources such as wording for alerts and orders, and clarity for the roles and responsibilities of communication leads.	Underway	EMBC and the BCWS have worked with provincial ministries, FNHA, FNESS, RCMP, ISC, and PSC to update the provincial Evacuation Operational Guidelines. First Nations and authorities have been engaged during the project.	EMBC will distribute updated Evacuation Operational Guidelines in spring 2019. EMBC will continue to engage with emergency management partners to gather feedback on the updated Evacuation Operational Guidelines, and continue to update them where appropriate.

	Recommendation	Status	Action to date	Next steps
49.	BC, First Nations and local governments, either individually or jointly, host readiness and post freshet (flood) and wildfire season open houses to share information, knowledge and experiences, as well as develop best practices.	Underway	<p>Provincial funding is available for post-emergency community meetings and for After Action Reviews.</p> <p>EMBC hosted twelve seasonal readiness workshops across B.C. in 2019 which bring partners together to prepare for seasonal risks.</p>	Provincial agencies will continue to work closely with local and First Nations governments, as well as ISC and other partners to share information and continuously improve.
50.	Improve succession planning within emergency response organizations by developing a knowledge management system that includes formal and experiential training provided by subject matter specialists, including individuals from within and outside government.	Complete (Ongoing)	<p>The BCWS has made progress and implemented changes such as: reinvigorating internal training and mentorship opportunities; adopting the “Finish Strong” program, which allows soon to be retirees an opportunity to train the individual that will be taking over their role; and reviewing certification requirements and processes while establishing a new people practices position to implement a comprehensive people practices strategy.</p> <p>EMBC is assessing a number of products and initiatives relevant to succession planning, including an approach for EMBC leadership development, an “EMBC Knowledge Transfer Toolkit”, and a “PECC and PREOC Staff Position and Qualification Matrix.” EMBC also continues to implement existing succession plans.</p> <p>EMBC and the BCWS are also assessing how to strengthen succession planning and overall capacity through the Temporary Emergency Assignment Management System which provides surge capacity staffing from across government.</p>	EMBC and the BCWS will continue to pursue succession planning initiatives.

	Recommendation	Status	Action to date	Next steps
51.	Expand the provision of prescribed fire training and extend the provincial certification program to non-agency personnel: • Training and certification must include all support positions within agencies • Evaluate the applicability of Parks Canada burn planning course and the US RX-310 Fire Effects course	Underway	Funding for prescribed fire has been increased for 2019/20. FLNRORD is currently developing a more comprehensive prescribed fire program and building staff capacity and knowledge regarding prescribed fire. The BCWS staff are working with a number of partners and stakeholders to conduct prescribed burns this spring and fall. The FESBC also funds prescribed burning projects to reduce wildfire risk on provincial Crown land.	Development of the new prescribed fire program will continue through 2019.
52.	Increase the number of basic firefighters by providing open access to S-100 training for all natural resource sector staff, industry, First Nations, communities, ranchers and other tenure holders.	Alternate Approach Used	Preliminary analysis indicates that training is widely available and not a barrier.	The BCWS is focusing efforts on building industry and stakeholder partnerships and mechanisms to encourage joint response opportunities.
53.	Increase the competency and effectiveness of containment teams by creating a training course, mentoring program and assessment system that emphasizes the role of professional forestry, the need for fire behaviour knowledge and the value and capacity of heavy equipment teams. Ensure courses are available to equipment operators, line locators, strike team leads and others involved in fire containment and fireguard construction.	Substantial Improvement	The BCWS is working with local stakeholders and industry to identify equipment inventories, roles and responsibilities, and options for assisting with containment and fire suppression. The use of the industry equipment strike team model will be expanded throughout the Province to support initial attack efforts. These strike teams are a combination of heavy equipment, operators and line locator personnel that can be quickly deployed in response situations. For 2019, the BCWS has initiated consistent Industry Engagement Workshops in preparation for the 2019 wildfire season. One objective of these workshops is to further increase the effectiveness of containment teams through industry contribution to firefighting efforts.	The BCWS expects to hold Industry Engagement Workshops in every fire zone by the end of May 2019. Identify new stakeholder processes and mechanisms for registration and participation in containment with the BCWS.

	Recommendation	Status	Action to date	Next steps
54.	Mandate the insurance industry to create an incentive program to encourage a proactive approach to emergency preparedness, such as insurance-saving for building structures with fire resistant materials.	Further Analysis / Discussion Required	The Insurance Bureau of Canada has now been made an ex-officio member of the BC FireSmart Committee, in order to more effectively incorporate insurance industry considerations (such as the use of incentives) into FireSmart planning.	<p>The members of the BC FireSmart Committee will continue to explore long term approaches to enhancing incentives for safe behavior and improving resiliency.</p> <p>The existing legislative framework currently precludes the province from “mandating” any action by insurance provider in terms of providing incentives.</p>

	Recommendation	Status	Action to date	Next steps
55.	Increase and sustain funding for wildland fire research and applied research in the fields of ecology, fire science, social science and economics to provide up-to-date, BC-focused information as the basis for land management decisions and strategies.	Complete (Ongoing)	<p>The National Blueprint for Wildland Fire Science has been published and B.C. is continuing to work with federal, provincial and territorial partners to implement science projects of mutual significance. The BCWS has also recently joined the Canadian Partnership – a research consortium that will help to advance the implementation of the Blueprint for Wildland Fire Science in Canada (2019-2029).</p> <p>The BCWS is working with ENV's Climate Action Secretariat and FLNRORD's Climate Change Branch on climate change adaptation science research projects to advance understanding of natural hazards such as wildfire.</p> <p>For 2018/19, the BCWS is investing \$1.2 million in research and innovation, including \$950,000 to the Canadian Partnership for Wildland Fire Science to advance research in fuel treatment efficacy, presumptive diseases, and other research priorities, and \$250,000 to FPInnovations for field equipment testing. For subsequent years, the BCWS will invest up to \$1 million annually.</p> <p>The BCWS has also joined FPInnovations as a voting member for 2019/20 to assist in equipment/innovation testing as it pertains to BCWS priorities.</p> <p>The BCWS held a Research and Innovation Symposium to guide future Research and Innovation priorities.</p> <p>The BCWS is adding additional staffing resources to manage priority projects and initiatives, such as research.</p>	<p>The Province will continue to support the implementation of priority initiatives to support the Blueprint for Wildland Fire Science Strategic Plans.</p> <p>The BCWS continues to prioritize research priorities for 2019/20 and beyond, where initial signs are pointing to focused efforts in presumption diseases (smoke inhalation), fuel treatment efficacy, health and safety, and other key areas.</p>

	Recommendation	Status	Action to date	Next steps
56.	Canada is encouraged, during its 2019 review of gas tax criteria, to permit the use of gas taxes for fire service infrastructure and equipment.	Complete (Provincial Action Complete)	<p>In late 2018, Infrastructure Canada circulated a second call to provinces for amendments to be considered during a federal government mid-point review of the Gas Tax Agreement.</p> <p>The Province has formally requested that fire services infrastructure be added as a new eligible expense item, within the Disaster Mitigation category.</p> <p>Decisions from Infrastructure Canada are expected as early as spring 2019.</p>	The Province will continue to advocate for the inclusion of fire services infrastructure as an eligible item under the Gas Tax Agreement within the Disaster Mitigation category.
57.	B.C. and Indigenous governments review traditional First Nations burning practices for their applicability and suitability for future forest and fuel management.	Underway	<p>Funding for prescribed fire has been increased for 2019/20. FLNRORD is currently developing a comprehensive prescribed fire program and building staff capacity and knowledge regarding prescribed fire. BCWS staff are also working with a number of partners and stakeholders to conduct prescribed burns this spring and are planning prescribed burns for the fall of 2019.</p> <p>The FESBC also funds prescribed burning projects as a way to reduce wildfire risk on provincial Crown land.</p>	<p>The BCWS will continue to work with FNESS to support planning with First Nations through the CRI program. Community Wildfire Protection Plans and FLNRORD fuel management plans will work to incorporate local Indigenous knowledge when identifying opportunities for prescribed fire and other fuel management activities in consideration of values at risk on the landscape.</p> <p>Development of the new prescribed fire program will continue through 2019.</p>
58.	Canada, B.C. and Indigenous governments collaborate to ensure reserve lands qualify for funding for forest fuel management and flood mitigation activities. Ensure a shared understanding of opportunities is built among eligible communities.	Substantial Improvement	<p>The Community Resiliency Investment (CRI) program launched in 2018 supports forest fuel management, inclusive of First Nations land. The CRI program has now implemented the first program intake and will be initiating new projects in spring 2019.</p> <p>ISC also provides FNESS with some funding on an annual basis to undertake forest fuel reduction activities on-reserve.</p>	<p>The Province will continue to invest in the new CRI program, which includes First Nations land.</p> <p>The Province will continue to work with the Government of Canada to support infrastructure funding for flood mitigation, including on First Nations land.</p>

	Recommendation	Status	Action to date	Next steps
59.	As part of the broader shift to a more coordinated, portfolio approach to risk reduction, identify the Forest Enhancement Society of BC (FESCB) as the primary public agency for the delivery of publicly subsidized fuel management initiatives and, through Union of BC Municipalities' representation on the FESBC board, draw on Strategic Wildfire Prevention Initiative experience.	Complete (Ongoing)	<p>The Community Resiliency Investment (CRI) program allows for a more coordinated, portfolio approach to wildfire risk reduction for communities. The CRI program is intended to provide a streamlined funding intake for communities in partnership with UBCM, FNESS, and the FESBC to provide an alignment of wildfire mitigation activities on the land base.</p> <p>The first application intake closed December 7, 2018. As of April 2019, over \$6 million had been awarded to 85 local authorities and First Nations.</p> <p>For 2019, the program is structured to fund FireSmart activities in all eligible communities throughout B.C.</p> <p>The BC FireSmart Committee will provide guidance and project prioritization advice for which applications are eligible for funding.</p>	The first application intake closed on December 7, 2018. The next application intake closes October 18, 2019.
60.	Canada, B.C., and First Nations and local governments collaborate to reduce vulnerability and incentivize the building of more resilient structures by adjusting building codes, regulations, bylaws and development permit requirements to encourage the use of fire-resistant building materials.	Further Analysis / Discussion Required	<p>To help First Nations prepare and better adapt to the threats of climate change, the 2019 Federal Budget announced \$211 million over five years, starting in 2019-20, to support increased resiliency and emergency management on-reserve.</p> <p>Investments from the federal government are expected to support the creation of an Indigenous Fire Marshal Office (IFMO). This would be a First Nations-led institution that would promote fire safety and prevention, establish standards, support training, provide subject matter expertise, undertake public education, and establish programs and services including Wildland Urban Interface response. The IFMO will work with the federal government on the establishment of building and fire codes on First Nations lands.</p>	The Province will work with other levels of government, including First Nations governments, to identify opportunities to reduce wildfire vulnerability.

	Recommendation	Status	Action to date	Next steps
61.	The Ministry of Forests, Lands, Natural Resource Operations and Rural Development, Ministry of Environment and Climate Change, Ministry of Health and other applicable ministries reconcile existing statutes limiting more extensive use of traditional and prescribed burning.	Underway	<p>Funding for prescribed fire has been increased for 2019/20. The ministry is also currently developing a comprehensive prescribed fire program and building staff capacity and knowledge regarding prescribed fire. BCWS staff are also working with a number of partners and stakeholders to conduct prescribed burns this spring and are planning prescribed burns for the fall of 2019.</p> <p>The FESBC also funds prescribed burning projects as a way to reduce wildfire risk on provincial Crown land.</p>	Development of the new prescribed fire program will continue through 2019.
62.	B.C. Wildfire Service eliminates the rotation of Incident Management Teams (IMTs) to various fires prior to containment. Support IMTs by creating specialized respite teams to transition and backfill IMTs or develop an alternate respite strategy.	Complete	New protocols established for days of rest. Rotation eliminated to the degree operationally possible.	
63.	B.C. Wildfire Service (BCWS) to be operationally reintegrated into regional operations of the Ministry of Forests, Lands, Natural Resource Operations and Rural Development (FLNRORD). Ensure land management in the areas of prevention and preparedness are achieved by maximizing the collective focus on initiatives and results.	Complete	An Associate Deputy Minister was appointed to oversee FLNRORD Operations and the BCWS.	Program level integration efforts continue.

	Recommendation	Status	Action to date	Next steps
64.	Undertake a portfolio approach to prevention where all possible partners are identified, collaborate to reduce risk, and assess performance and success at the portfolio level, including: • Forest licensees • Partnerships between B.C. Wildfire Service and First Nations communities • Private land owners • Federal, First Nations and local governments • Ministry of Environment and Climate Change, including B.C. Parks • Ministry of Forests, Lands, Natural Resource Operations and Rural Development • Funding partners (current examples include: Forest Enhancement Society of B.C. and Strategic Wildfire Prevention Initiative).**	Underway	<p>Specialists and Land Managers (including BC Parks) are developing integrated investment plans that encompass all Crown land priorities for fuel mitigation treatments. These planning initiatives will also be linked to community and First Nations wildfire mitigation plans and will support the FESBC and the Community Resiliency Investment (CRI) program funding initiatives.</p> <p>The \$50-million CRI program was established in September 2018 to help local authorities and First Nations lower wildfire risks around their communities. As part of Provincial Budget 2019, an additional \$10 million has been added, for a total of \$60 million. To support this program, the BCWS is developing a wildfire management risk-based planning framework that will consider community values, critical infrastructure and cultural values.</p> <p>The new CRI program funding program enables enhanced coordination among landholders for wildfire prevention.</p> <p>The BCWS is providing \$400,000 to the Association of BC Forest Professionals to develop fire-related professional development sessions, which will provide guidance on the use of fire and management of fire risk when planning forestry operations.</p> <p>A FLNRORD/ENV government Prescribed Fire Steering Committee has been established.</p>	The BCWS will continue to move the prevention initiatives noted forward.

	Recommendation	Status	Action to date	Next steps
65.	Encourage the establishment of area-based tenures adjacent to Indigenous reserves and non-Indigenous communities, where not already established as community forests, woodlots, tree farm licenses, or First Nation woodland licenses.**	Underway	The BC Community Forest Association has been exploring the feasibility of expanding small area-based tenures in proximity to communities and has produced a report for FLNRORD's review.	FLNRORD and the BC Community Forest Association are now jointly exploring the feasibility of expanding small area-based tenures in proximity to rural communities.
66.	Fire be established as a management objective in the Forest and Range Practices Act and other applicable legislation and regulation to encourage fire as a part of land management.**	Underway	FLNRORD is reviewing the Forest and Range Practices Act and regulations to assess and consider an alternative forest planning framework to improve the province's ability to manage landscape-scale disturbances such as wildfire.	FLNRORD will assess and consider a new forest planning framework to improve the management of landscape-scale disturbances such as wildfire.
67.	Create mechanisms to encourage fire prevention activities such as thinning, bio-mass utilization, targeted grazing and alternate species and densities.	Complete (Ongoing)	<p>The new Community Resiliency Investment (CRI) program, launched September 2018, provides \$60 million for wildfire risk reduction and fire prevention activities (\$50 million was announced in September 2018, and an additional \$10 million was announced with Provincial Budget 2019).</p> <p>The Chief Forester released Fire Management Stocking Standard Guidance in 2016 to encourage reduced stocking within the Wildland/Urban Interface.</p> <p>In addition to the above, the FESBC is funding a number of biomass utilization projects. https://news.gov.bc.ca/releases/2019FLNR0017-000178</p>	<p>The first application intake closed on December 7, 2018. The next application intake closes October 18, 2019.</p> <p>As part of CleanBC, the Province will support the production of 650 million litres of renewable fuels per year by 2030 and make industrial natural gas consumption cleaner by putting in place a minimum requirement of 15% to come from renewable gas. These measures are expected to support increased biomass utilization over the medium term.</p>

	Recommendation	Status	Action to date	Next steps
68.	Expand FireSmart community objectives to become broad-based objectives for all of British Columbia. Establish a governance structure to support implementation, monitoring and continuous improvement of FireSmart objectives.**	Complete	<p>The BC FireSmart Committee continues to expand its activities and impact. 2018/19 outcomes included expanded workshops and training, as well as a social media awareness campaign that includes a new public website and promotional videos.</p> <p>The Insurance Bureau of Canada has now been made an ex-officio member of the BC FireSmart Committee, in order to more effectively incorporate insurance industry considerations (such as the use of incentives) into FireSmart planning.</p>	<p>The BC FireSmart Committee will continue to promote FireSmart objectives to reduce wildfire risk.</p> <p>The members of the BC FireSmart Committee will continue to explore long term approaches to enhancing incentives for safe behavior and improving resiliency.</p>
69.	Review existing land use plans to ensure that the location of Old Growth Management Areas, ungulate winter ranges, visual corridors and other land-use designations does not preclude the reduction of wildfire risk adjacent to communities.	Underway	<p>Land use objectives are reviewed post-wildfire for the need for revision. FLNRORD updates Fire Management Plans for each natural resource district each year.</p> <p>FLNRORD will be engaging on proposed amendments to the Forest and Range Practices Act, including how to better manage for wildfire risk.</p>	The Province will incorporate wildfire risk reduction in updating fire management plans.
70.	B.C. review the effectiveness and utility of existing fire management plans and adjust accordingly to meet the needs for use during emergencies.	Underway	<p>FLNRORD staff are developing more comprehensive Fire Management Plans to provide more specific information needed for Incident Management Teams. These plans now provide information on priority values, fire effects, suppression considerations and constraints and any values threatening first responder safety.</p> <p>FLNRORD is moving toward Fire Management Plans that are risk-based, focusing efforts in terms of suppression considerations and pre-wildfire mitigation.</p> <p>Land planning staff work closely with BCWS Fire Centres to ensure quality and effectiveness of Fire Management Plans.</p>	The Province will continue to pursue these initiatives to improve prevention and the effectiveness of fire management plans.

	Recommendation	Status	Action to date	Next steps
71.	Encourage existing licensees to participate in risk reduction and treatment of interface areas by addressing existing disincentives and creating opportunities through statute, regulation or other mechanisms.	Further Analysis / Discussion Required		FLNRORD will continue to assess opportunities to further encourage wildfire risk reduction activities in addition to those offered through Community Resiliency Investment program and the FESBC.
72.	Support Ministry of Forests, Lands, Natural Resource Operations and Rural Development initiatives related to bioenergy. Encourage and accelerate their implementation with a strong consideration to promoting fuel management.	Underway	As part of the Coast Forest Sector Revitalization Initiative, FLNRORD has established Fibre Recovery Zones on the Coast and is able to establish such zones in the Interior where there is a demand for lower quality residual fibre. In these zones, new tools are available to improve fibre utilization including: do not burn orders and new residual fibre tenures for secondary users.	FLNRORD is considering how fibre can be used for purposes such as bioenergy as part of the Province's CleanBC strategy.

	Recommendation	Status	Action to date	Next steps
73.	B.C. expeditiously determine the condition, vulnerability and effectiveness of the Province's 500 kilometres of dikes through use of leading edge technologies and expertise. In collaboration with Indigenous governments, Canada and B.C. assess and reconcile the absence of dikes in First Nations communities.	Substantial Improvement	<p>The Province is undertaking a dike crest and alignment survey of all dikes in the province (1,100 km) and an orphan dike assessment (100 in the province) both of which are anticipated to be complete in 2019/2020.</p> <p>The Province is undertaking a dike consequence classification for all dikes, amongst other projects.</p> <p>The Province has also funded several projects to determine and improve the condition of diking infrastructure across the province, including several projects with First Nations regarding dikes in their communities.</p> <p>Through the National Disaster Mitigation Program, the Community Emergency Preparedness Fund, and other EMBC funds, the Province has funded many flood mapping studies that help communities gain a better understanding of their 200-yr flood elevations.</p> <p>The responsibility for dikes rests with local authorities. First Nations will need to work with ISC to identify diking locations, construct diking infrastructure, and determine operation and maintenance responsibilities and scheduling.</p>	The Province will continue to assess B.C.'s dikes and will actively pursue infrastructure funding to address diking needs.
74.	As part of overall emergency management, B.C. undertake hazard risk mapping exercises and educational campaigns in communities vulnerable to crisis situations along major transport routes, such as pipelines, railways and highways.	Underway	<p>EMBC participates in and contributes to community-level Hazard, Risk and Vulnerability Analysis (HRVA) processes. EMBC provides a HRVA tool to communities to assess their risks. This tool is currently being updated with the support of a working group which includes representatives from local authorities and First Nations.</p> <p>Local communities work with critical infrastructure owners on assessments and exercises specific to a given area or route.</p>	<p>EMBC and other provincial agencies will continue to support local authorities in their hazard assessment and exercising activities.</p> <p>EMBC will launch the new HRVA tool in 2019.</p>

	Recommendation	Status	Action to date	Next steps
75.	B.C. increase the use of traditional and prescribed burning as a tool to reduce the risk associated with landscape and local-level hazards, and to regenerate ecosystems. B.C. expand the window for traditional and prescribed burns by modifying how the venting index determines burn windows, including recognizing the difference between burns following timber harvest and burns as part of a wildfire risk-reduction prescription.**	Underway	<p>Funding for prescribed fire has been increased for 2019/20. FLNRORD is currently developing a comprehensive prescribed fire program and building staff capacity and knowledge regarding prescribed fire. BCWS staff are also working with a number of partners and stakeholders to conduct prescribed burns this spring and are planning prescribed burns for the fall of 2019.</p> <p>The FESBC, Provincial Ecosystem Restoration program, and Habitat Conservation Trust, also fund prescribed burning projects as a way to reduce wildfire risk on provincial Crown land while achieving habitat and other land management objectives.</p>	<p>As of April 2019, the Ministry of Environment and Climate Change Strategy (ENV) is finalizing proposed revisions to the <i>Open Burning Smoke Control Regulation</i> (OBSCR). Information on the proposed changes can be found here. If the proposal is adopted before summer new burning rules will be in effect for the fall burning season.</p> <p>The updated OBSCR provides additional flexibility to allow for community wildfire risk reduction activities in both the high and medium smoke sensitivity zones.</p>
76.	B.C. investigate and assess the possibility of a prescribed burn statute that would offer protection for responsible and permitted burners.	Complete	Funding for prescribed fire has been increased for 2019/20. FLNRORD is currently developing a comprehensive prescribed fire program and building staff capacity and knowledge regarding prescribed fire. BCWS staff are also working with a number of partners and stakeholders to conduct prescribed burns this spring and are planning prescribed burns for the fall of 2019.	The BCWS will work with partners on the prescribed and managed wildfire project. Any required legislative or regulatory implication requirements will be considered as part of this work.
77.	B.C. re-evaluate the position of carbon-loading counts, specifically the exemption of carbon released by wildfires and the inclusion of carbon released from prescribed burning.	Alternate Approach Used	The Province believes it is important to follow international guidelines on carbon accounting. Canada, through the Canadian Forest Service, is involved in developing and revising these guidelines and consults with the provinces, through the National Forest Sinks Committee when changes are contemplated.	
78.	B.C. Ministry of Transportation and Infrastructure incorporate additional fire prevention messaging into digital message signage, particularly during times of extreme fire danger.	Complete	Messaging on digital highway signs is updated as needed.	

	Recommendation	Status	Action to date	Next steps
79.	Increase disaster awareness among British Columbians by leveraging existing resources, such as PreparedBC and expanding its reach to be more prominent, interactive and dynamic.	Underway	<p>EMBC launched the PreparedBC Facebook page in April, 2019 that joins the @PreparedBC Twitter feed as a place for the public to engage on the subject of readiness.</p> <p>The PreparedBC website has also undergone a design and content update, which makes preparedness information easily accessible to all British Columbians.</p>	<p>EMBC plans to produce a report outlining findings from a PreparedBC local authority survey & follow-up emergency program coordinator interviews. This report will inform full PreparedBC guide revisions and improved service delivery.</p> <p>EMBC and the BCWS will launch a new Wildfire Preparedness & Prevention Guide in June, 2019.</p> <p>EMBC will release a revised Master of Disaster classroom program for the 2019/2020 school year, reflecting teacher feedback and the results of the Indigenous Partnerships Project. The intent is to make the resources more relevant, accessible and inclusive for all B.C. youth.</p> <p>EMBC will continue their ongoing promotion and growth of the Partners in Preparedness retail program.</p>

	Recommendation	Status	Action to date	Next steps
80.	To increase the resiliency of B.C.'s ecosystems and communities against climate change, B.C. establish a predictable and stable revenue stream to provide enhanced investment in prevention and preparedness. B.C. consider a new carbon tax revenue stream as a source of funds.**	Further Analysis / Discussion Required		<p>Further to the Office of the Auditor General's Report titled "Managing Climate Change Risks: An Independent Audit," government's CleanBC Plan contains a commitment to developing a climate change adaptation strategy to be released in 2020. Engagement on climate risks and strategy development will begin in spring 2019.</p> <p>Any potential expenditure or revenue implications of cross-government climate change adaptation activities will be considered as planning progresses.</p>
81.	B.C. develop integrated wildfire risk management strategies to guide and prioritize the expenditure of funds through a single source and ensure that expenditures reflect community risk rather than a community's ability to participate financially.	Complete	The new Community Resiliency Investment program, launched September 2018, provides \$60 million for wildfire risk reduction and fire prevention activities (\$50 million was announced in September 2018, and an additional \$10 million was announced with Provincial Budget 2019).	

	Recommendation	Status	Action to date	Next steps
82.	Collaborate with local Indigenous and non-Indigenous communities in response efforts. Local support could include additional capacity of forest professionals on containment teams, local knowledge liaisons, equipment operators and firefighters.	Underway	<p>The BCWS has partnered with FNESS and ISC on a strategy to deliver training required for Type 2 and Type 3 firefighting crews. FNESS is leading this training this spring, supported by \$150,000 from the BCWS and \$95,000 from ISC.</p> <p>Guidance is being provided to interested Indigenous communities to respond to master standing offer requests to supply Type 3 firefighting crews. The BCWS is also providing advice to Indigenous communities interested in upgrading their existing Type 3 crews to Type 2 crews.</p> <p>Based on a pilot project in Alexis Creek this winter, the BCWS is developing a First Nations firefighter recruitment strategy to implement throughout B.C.</p> <p>The BCWS is holding joint training workshops with forest industry crews to better assist in wildfire response throughout the province this spring.</p>	The BCWS will continue to meet regularly with Indigenous communities to discuss communications, firefighter recruitment opportunities and contract opportunities.
83.	When circumstances allow, emergency managers and responders should consider having First Nations stay in their traditional territories, or with nearby Indigenous communities that can provide culturally appropriate assistance and support, with specific attention paid to Elders and those with special needs.	Complete	<p>In an evacuation, this is within the scope of the First Nation evacuation plans. A clear policy on reimbursement to host a neighbouring community has been developed.</p> <p>The value of remaining within the traditional territory is recognized.</p>	EMBC is undertaking formal policy work on evacuations which will strengthen recognition of cultural considerations.

	Recommendation	Status	Action to date	Next steps
84.	The Office of the Fire Commissioner, in conjunction with the B.C. Wildfire Service, be encouraged to develop a strategy that supports First Nations communities and rural and remote communities that lack capacity for fully resourced fire departments but seek emergency training and response capacity.	Underway	<p>To help First Nations prepare and better adapt to the threats of climate change, the 2019 Federal Budget announced \$211 million over five years, starting in 2019-20, to support increased resiliency and emergency management on-reserve.</p> <p>Investments from the federal government are expected to support the creation of an Indigenous Fire Marshal Office. This would be a First Nations-led institution that would promote fire safety and prevention, establish standards, support training, provide subject matter expertise, undertake public education, and establish programs and services including Wildland Urban Interface response.</p> <p>The OFC and the BCWS have established a training program for structural firefighters who respond to wildfire incidents and in spring 2019 there will be over 50 wildfire training sessions for fire departments throughout B.C. led by Structural Protection Specialists. Training suitable for non-firefighters has also been created and funding is being sought for this type of training.</p>	The OFC will continue to work with ISC and the Indigenous Fire Marshal Office project team to support First Nations.

	Recommendation	Status	Action to date	Next steps
85.	B.C. improve interagency operations by developing a single, integrated system for identification and access permits at roadblocks. Ensure corridor routes during states of emergency remain open for as long as possible and reopen as quickly as possible following emergency events.**	Underway	EMBC and the BCWS have worked with provincial ministries, FNHA, FNESS, RCMP, ISC, and PSC to update the provincial Evacuation Operational Guidelines. First Nations and local authorities have been engaged during the project.	<p>EMBC will distribute updated Evacuation Operational Guidelines in spring 2019. These guidelines will outline the roles and responsibilities for establishing and maintaining roadblocks, and will also contain resources that First Nations and local authorities may use to support the provision of permits for those requesting to gain access to evacuated areas.</p> <p>EMBC will continue to engage with emergency management partners to gather feedback on the updated Evacuation Operational Guidelines, and continue to update them where appropriate.</p>
86.	B.C. assess and evaluate the provincial Flood Response Plan for its use during emergencies. Assess and plan for gaps, with specific attention paid to supporting Plan implementation during floods.	Complete	<p>In May 2018, the BC Flood Response Plan was updated internally, to reflect 2017 freshet experiences and lessons. A further update to reflect lessons from 2018 is planned for spring 2019 (see Recommendation #36).</p> <p>The BC Flood Risk Strategy, under development, will review roles and responsibilities, and examine the current governance model.</p>	The Province will continue work on a BC Flood Risk Strategy.
87.	B.C. Wildfire Service adjust policies and procedures to enable the earliest possible commencement of fire suppression activities without compromising worker safety.	Complete	<p>The BCWS continually reviews and adjusts policies and standard operating procedures/guidelines to effectively and efficiently suppress fire through the BCWS resource centre and continual training.</p> <p>In 2018, the BCWS included more night shifts on fires that safely allowed for this and also had firefighters start their day earlier to take advantage of more favourable weather conditions.</p>	

	Recommendation	Status	Action to date	Next steps
88.	B.C. Wildfire Service, in partnership with other ministries, create a stronger linkage during emergencies between Incident Management Teams and local sector agency managers to support the transfer of local information to the Incident Commander.	Underway	FLNRORD has established Joint Hazard Management Teams – a mechanism and process for bringing together land managers, emergency management and response functions together to strengthen collaboration and integrated management of natural hazards.	This process was tested in Kamloops Fire Centre in 2018, and is being expanded to all BCWS Fire Centres by 2020.
89.	Support a 'B.C. first' model for employment during emergencies where, as additional resources are required, qualified Indigenous and non-Indigenous companies, contractors and consultants from B.C. are selected first. Resources from other provinces and countries to be deployed after readily available B.C. employees have been deployed.**	Complete	<p>The BCWS's policy is to exhaust all qualified B.C. personnel first prior to securing external resources. Selection of qualified suppliers is made based on operational requirements, including geographic proximity, availability, certification, and safety requirements and in consideration of forecasted need over several operational periods (see Recommendation #21).</p> <p>Ministries will continue discussions with Indigenous and local companies and businesses to explore opportunities for availability and ideas that would support future business opportunities for Indigenous companies.</p>	The Province will continue to assess opportunities to make further use of local resources during response.

	Recommendation	Status	Action to date	Next steps
90.	Increase use of technology by frontline workers during response by incorporating the use of drones, real-time mapping and synchronization and the use of LiDAR technology to assess and assist with planning in all phases of emergency management.	Underway	<p>Provincial agencies made increased use of technology in 2018 including drones and Orthoimagery to increase the understanding of risks to communities.</p> <p>In consultation with GeoBC, EMBC has developed Flood Assessment and Rapid Damage Assessments (RDA) apps. The flood assessment app is used by FLNRORD for site level technical advice and investigation and may be provided to local authorities and First Nations in the future. The RDA app is available to communities that need to conduct assessments following flooding or earthquake.</p> <p>The Common Operating Picture platform continues to be enhanced, reflecting the input of users and contributors. It is available to emergency managers in communities.</p> <p>GeoBC has established a corporate program for Remote Piloted Aircraft Systems (RPAS) also known as drones. RPAS technology promises significant benefits to Government in the collection and use of high quality data, with increased safety, less cost and less environmental impact.</p>	<p>The BCWS will be piloting the use of night vision goggles to use in early detection and prioritization of response in the 2019 season. This technology is beneficial following lightning events in interface areas to assist with earlier detection and response.</p> <p>BCWS staff will be given increased access to technology, including tablet computers/iPads in the field and unmanned aerial vehicles (drones) to assist with fire mapping and infrared scanning.</p>
91.	Develop a basic disaster response financing fund for communities to immediately access once an Emergency Operations Centre has been activated.	Complete (Ongoing)	<p>The Province provides reimbursement for response actions.</p> <p>EMBC has introduced a new Response Reimbursement Claims Form in March, 2019 which is intended to improve the efficiency of processing claims for First Nations and local authorities.</p> <p>Some First Nations require upfront funds to pay for response actions while awaiting reimbursement. EMBC has been flexible in identifying alternate payment options in these circumstances.</p>	<p>EMBC is working with ISC regarding mechanisms to provide First Nations with cash flow required to undertake emergency/disaster response actions.</p> <p>EMBC is also engaging with communities to help them understand financial reimbursement criteria and processes more fully.</p>

	Recommendation	Status	Action to date	Next steps
92.	B.C. Ministry of Health, in collaboration with regional health authorities and the First Nations Health Authority, develop stable and sustainable mental health recovery programs that acknowledge cultural linkages to the land and the compounding challenge of historical trauma.	Substantial Improvement	The Ministry of Health has completed a draft Mental Health and Wellness Disaster Recovery Guide. This work was informed by a January 2019 workshop attended by mental health and wellness partners, including FNHA, to assess opportunities to streamline and systematize roles, responsibilities and funding for mental health recovery. The workshop also identified additional partners to consult in the development of a Mental Health and Wellness Disaster Recovery Guide and Toolkit.	The Ministry of Health will continue to develop a Mental Health and Wellness Disaster Recovery Toolkit, and will complete a partner review of the draft Mental Health and Wellness Disaster Recovery Guide and Toolkit. This work will be aligned with the overarching EMBC disaster recovery framework.
93.	In partnership with First Nations and local governments, B.C. review the legislative framework supporting recovery, identify gaps and ensure they are addressed.	Underway	The Province is working with communities impacted by 2018 floods and wildfires, to identify challenges with recovery programs and funding.	EMBC is undertaking a comprehensive review of the Emergency Program Act, including its ability to adequately support recovery activities.
94.	Canada, BC, regional health authorities, First Nations Health Authority and other agencies collaborate to identify and implement mental health resources and support for residents both during and after disasters.	Substantial Improvement	The Ministry of Health has completed a draft Mental Health and Wellness Disaster Recovery Guide. This work was informed by a January 2019 workshop attended by mental health and wellness partners, including FNHA, to assess opportunities to streamline and systematize roles, responsibilities and funding for mental health recovery. The workshop also identified additional partners to consult in the development of a Mental Health and Wellness Disaster Recovery Guide and Toolkit.	The Ministry of Health will continue to develop a Mental Health and Wellness Disaster Recovery Toolkit, and will complete a partner review of the draft Mental Health and Wellness Disaster Recovery Guide and Toolkit. This work will be aligned with the overarching EMBC disaster recovery framework.

	Recommendation	Status	Action to date	Next steps
95.	B.C. host post-emergency debriefing exercises at local, regional and provincial levels to support proactive planning and recovery.	Substantial Improvement	<p>Debriefing processes take place after each significant emergency event.</p> <p>The Province provides funding for post-emergency debriefs at the community level, and provides opportunities for input into regional and provincial scale After Action Reviews.</p> <p>The wildfire debrief for the Northwest Region, which was conducted in a culturally sensitive fashion, and involved both non-Indigenous and First Nations through a phased process, provides one example of how debriefing processes can be adapted to meet local community needs.</p>	EMBC and other provincial agencies will continue to engage partners in debriefing processes for significant events, and pursue continuous improvement for these processes with input from involved partners.
96.	B.C., through Emergency Management BC, Indigenous Services Canada, the First Nations' Emergency Services Society, and First Nations and local governments develop an online system for registration of evacuees, and for the management and reimbursement of appropriate expenses incurred through emergency response and recovery.	Underway	<p>EMBC is working to improve the Provincial Emergency Support Services (ESS) program through a project aimed at digitizing and modernizing ESS delivery. This project will streamline processes so evacuated individuals can access services more easily and efficiently.</p> <p>The first release of the digital ESS System is on track to be piloted in four communities for the upcoming Freshet season. Pilot communities are: Kamloops, Tk'emlups te Secwepemc , Regional District of Central Okanagan and Prince George. The ESS System can also be deployed and available for any community not involved in the pilot project that is unexpectedly asked to host large numbers of evacuees.</p> <p>This pilot will include evacuee registration with a self-serve registration option as well. The goal of the pilot is to reduce wait times for evacuees and reduce processing time for volunteers. The intent is to trial the system in a real-time ESS environment. To ensure continuity of service, current ESS systems and forms will be maintained as a backup should the new system encounter difficulties. The ESS teams will provide feedback on the pilot system and work with the Province to inform further product/program development.</p>	EMBC will continue to work extensively with partners on this initiative, and will build upon the summer 2019 pilot to implement further program improvements.

	Recommendation	Status	Action to date	Next steps
97.	B.C. provide a clear point of contact for evacuees and those facing relocation during recovery, restoration or rebuilding of homes or other infrastructure within Indigenous and non-Indigenous communities.	Underway	The establishment of a resiliency centre by a local or First Nations government for evacuees and those facing relocation during recovery, restoration or rebuilding of homes is an authorized expense.	EMBC will continue to encourage impacted communities to establish a resiliency centre and will assist them to do so.
98.	Salvage fire-damaged timber in a manner that maximizes economic, ecological and other values, and is well-coordinated and communicated with licensed resource users on the land base.	Complete	Fire-damaged timber is being salvaged primarily by existing forest tenure holders, in accordance with guidelines developed by the Chief Forester.	
99.	B.C. remove disincentives for property owners to remove burned timber from their properties and support efforts to reduce the risk of reburn.	Underway	The new Community Resiliency Investment (CRI) program is now funding increased FireSmart activities on private lands.	FLNRORD, with partners, will monitor the CRI program, and assess its effectiveness with respect to Recommendation #99.
100.	B.C. develop a protocol following wildfires to monitor negative impacts on natural regeneration of trees, native plant species and traditional food sources.	Complete (Ongoing)	This is part of the Post Wildfire Natural Hazard Assessment process and recovery works.	FLNRORD will continue to monitor for such impacts.

	Recommendation	Status	Action to date	Next steps
101.	B.C. develop and apply innovative post-fire management strategies for ecosystems in the driest climates (such as Ponderosa Pine and Interior Douglas Fir bio-geoclimatic zones) where contemporary and future climate, combined with fire damage to soils, may render sites unable to support coniferous trees.	Underway	Post fire season research and adaptive management now targets recovery of fire damaged ecosystems. FLNRORD, with partners, is engaged in and funding research into appropriate treatments for such areas, including appropriate species selection.	FLNRORD will actively look at adaptive strategies for changing post-wildfire circumstance.
102.	B.C. develop and apply post-fire replanting strategies for dry forests that enhance resilience rather than optimize timber production, for example, adjust preferred species and reduce stocking standards.	Underway	Multiple strategies are being evaluated. Work is underway on a number of initiatives which can contribute to this recommendation, such as the Forest Carbon Initiative and Forests For Tomorrow. Work on integrating these initiatives is underway.	FLNRORD will assess opportunities to further integrate multiple strategies in support of forest resilience.
103.	B.C. co-develop timber salvage harvest plans with all forest tenure holders, including the joint planning and allocation of available timber for harvest.**	Complete (Ongoing)	Where multiple tenure holders operate in an area, salvage and retention plans are being co-developed.	FLNRORD will continue to work with partners to co-develop plans.
104.	Following wildfire events, promptly undertake timber supply reviews to enable industry response and adaptation to a new annual allowable cut, and to allow B.C. to better understand and respond to impacts on habitat, fibre availability and community stability.**	Complete (Ongoing)	This is an immediate priority after wildfire events and is FLNRORD's practice. Most fire events will not trigger the need to reset the allowable annual cut for a management unit.	FLNRORD will continue to undertake such post-wildfire reviews as a priority.

	Recommendation	Status	Action to date	Next steps
105.	Consistent with the Sendai principle of Build Back Better, the Disaster Financial Assistance (DFA) and Disaster Financial Assistance Arrangements (DFAA) programs provide greater flexibility to restore damaged sites in ways that reduce the likelihood of repeat events. B.C. create a fund for the acquisition of lands and properties which, while legally created and/or constructed, are no longer viable given disaster or climate-related events.	Further Analysis / Discussion Required	<p>The Province has recently developed a disaster recovery framework to promote coordination and consistency during community recovery.</p> <p>This recovery framework is being informed by 2017 and 2018 flood and wildfire recovery efforts to date.</p> <p>Specific to Grand Forks flood recovery, the Province and the authorities are working together to identify solutions for properties in neighbourhoods that are now slated to return to the natural flood plain.</p>	<p>The province will be actively working with partners to implement the disaster recovery framework and will also be engaging with partners regarding legislative change which may be required to support recovery.</p> <p>The Province has now formally adopted the Sendai Framework.</p> <p>EMBC is planning a review of the Emergency Program Act with respect to its ability to adequately support recovery activities.</p> <p>EMBC is also updating the Compensation and Disaster Financial Assistance Regulation to provide greater clarity regarding roles and responsibilities.</p> <p>The DFAA allows for mitigation measures and innovative recovery solutions which are both designed to reduce vulnerability to future emergencies.</p> <p>ISC also makes provisions available to First Nations for enhancements to be included in recovery/reconstruction in a manner that is consistent with the principle of Build Back Better.</p>

	Recommendation	Status	Action to date	Next steps
106.	Following an evacuation, provide support and resources to Indigenous and non-Indigenous communities to host meetings to discuss the evacuation as part of the recovery and healing process.	Complete	Support is provided / available for communities to host gatherings after an evacuation.	
107.	Provide an open source training opportunity for Indigenous and non-Indigenous communities to learn how to navigate the financial recovery system.	Underway	As part of seasonal readiness overview and training sessions provided to Indigenous and non-Indigenous communities throughout B.C., EMBC delivers training materials specific to the emergency response claim submission process. The materials provide an overview of the financial recovery system, guidance/education, and best practices with the intent to support communities to maximize their potential recovery, and to minimize EMBC review and processing times. A total of 12 sessions are planned through the spring 2019 with 11 completed by mid-April.	EMBC is continuing to assess existing materials and will where appropriate transfer to open source or develop new training materials aligned with open source requirements.
108.	Create a bridging program to aid people during recovery in meeting their needs from the land, such as traditional food gathering, haying and grazing for livestock, and access to guiding areas while restoration is underway.	Underway	<p>ISC has a Build Back Better policy which supplies transition food replacement to impacted First Nations.</p> <p>The Province has provided funding to the Canadian Red Cross for programming that supports First Nations cultural needs, including traditional foods.</p> <p>With respect to livestock, in July 2018 a new Standard Operating Guideline was finalized between the BCWS and the Range Program. This Standard Operating Guideline outlines how range issues will be addressed in wildfire planning and response, including review of requests for range access for evacuated livestock.</p> <p>Support for the emergency provision of hay (and other animal feeds) can be provided for during the response and recovery phases through an EMBC Task Number provided to a local authority or First Nation for the event.</p>	The Province will continue to consider this recommendation with respect to the implementation of the disaster recovery framework.

Appendix 2: 2017/2018 After Action Review Inventory

2017/18 After Action Review Inventory		
Type	Title	Author(s)
2017 AAR	Addressing the New Normal: 21 st Century Disaster management in British Columbia	George Abbott and Chief Maureen Chapman
2017 AAR	An Initial Assessment of the Emergency Management BC Response	Emergency Response Management Consulting Ltd. (ERMC)
2017 AAR	Provincial After-Action Review (Tier 3)	Province of B.C.
2017 AAR	Health System Wildfire Response AAR	Health Emergency Management BC (HEMBC)
2017 AAR	Review of 2017 Flood Response: Okanagan Lake Regulation System and Nicola Dam	Associated Environmental
2017 AAR	From the Ashes: Reimagining Fire Safety and EM in Indigenous Communities	Indigenous Services Canada (ISC) <i>(INAC at the time of publication)</i>
2017 AAR	With Us Not For US - FNHA Interior Region 2017 Wildfire Report	First Nations Health Authority (FNHA), Sandra Shields
2017 AAR	BC Parks 2017 Wildfire Response	BC Parks, Lindsay Vandesteeg
2017 AAR	The Fires Awakened Us (<i>Nagwedižk'an Gwaneš Gangu Chinidžed Ganexwilagh</i>)	Tsilhqot'in National Government
2017 AAR	Emergency Coordination and Reputation Management Sub-Committee Recommendations	Tourism Marketing Committee
2018 AAR	Trial by Fire: Nadleh Whut'en and the Shovel Lake Fire	Karyn Sharp and Andreas Krebs
2018 AAR	#TahltanStrong: Alkali Lake Fire 2018 Report	Iskut Band and Tahltan Band
2018 AAR	2018 Freshet and Wildfire PECC AAR	Emergency Management BC (EMBC)
2018 AAR	2018 PREOC AARs (NWE, NEA, and CTL)	Emergency Management BC (EMBC)
2018 AAR	ESS Actions for Consideration	Emergency Management BC (EMBC)
2018 AAR	2018 BC Health System Wildfire Response After Action Report	Health Emergency Management BC (HEMBC)
Climate	Managing Climate Change Risks: An Independent Audit	Office of the Auditor General