

Managing Climate Change Risks: An Independent Audit Released 02/18

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PAC Meeting Plan ¹	[12/06/18]	Prepared by: Thomas White, Climate Action Secretariat	Reviewed by: Bobbi Plecas, Deputy Minister, Climate Change, ENV
1 st APPA Update	[25/02/19]	Prepared by: Johanna Wolf, Climate Action Secretariat	Reviewed by: Mark Zacharias, Deputy Minister, ENV
2 nd APPA Update	[28/02/20]	Prepared by: Rebecca Westley, Environment & Climate Change Strategy (ENV) with input from: Agriculture (AGRI); Emergency Management BC (EMBC); Forests, Lands, Natural Resource Operations & Rural Development (FLNRORD); Municipal Affairs & Housing (MAH); Transportation & Infrastructure (TRAN).	Reviewed by: Mark Zacharias, Deputy Minister, ENV
3 rd APPA Update	(05/03/2021)	Prepared by Lindsay Johnson, Environment & Climate Change Strategy (ENV) with input from Agriculture, Food and Fisheries (AFF); Emergency Management BC (EMBC); Forests, Lands, Natural Resource Operations & Rural Development (FLNRORD); Municipal Affairs (MUNI); Office for Housing and Construction Standards (AG-OHCS); Transportation & Infrastructure (TRAN).	Reviewed by: Kevin Jardine, Deputy Minister, ENV

¹ The audited organization will be required to present their initial action plan at this meeting (i.e. First three columns completed for each OAG recommendation included in the audit report)

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Action Plan and Progress Assessment (APPA) for the implementation of audit recommendations from the OAG- Prepared for the Select Standing Committee of Public Accounts
Attention: Mike Bernier, Chair and Rick Glumac, Deputy Chair of the Select Standing Committee on Public Accounts

Rec. # Accepted? Yes / No ²	OAG Recommendations	Actions Planned & Target Date(s) ³	Assessment of Progress to date ⁴ and Actions Taken ⁵ (APPA update)
1 Yes	Undertake a province-wide risk assessment that integrates existing risk assessment work and provides the public with an overview of key risks and priorities.	The Climate Action Secretariat (CAS) is leading a province-wide climate risk assessment that will produce a framework for and a strategic assessment of climate-related risks that can be used to prioritize adaptation responses across government. The assessment enables government to compare different climate-related risks, and compare those with other risks, to develop proportional responses to priority risks, and to identify potential situations where current response capacity may be exceeded. Findings will be consistent with risk disclosure standards, provincial risk management policy, and the framework can be used to iterate the assessment in the future. Target Date: Preliminary Assessment - Complete. Updated Risk Assessment due in 2025 and then every 5 years.	<p>Progress Assessment: Fully/Substantially Implemented</p> <p>Actions Taken & Discussion: A Preliminary Strategic Climate Risk Assessment for B.C. was completed and released publicly in July 2019. CAS will continue to work with partners to build on this work to develop scalable climate risk assessment approaches that integrate Indigenous perspectives and provide useful information to inform climate adaptation actions. Amendments to the <i>Climate Change Accountability Act</i> in 2019 require the Minister to publicly report on a determination of climate change risks every five years, and actual and proposed actions to manage those risks annually.</p> <p>Work Underway: To inform future risk assessments, CAS is partnering with the First Peoples' Cultural Council on a project to understand the impacts of climate change on Indigenous cultural heritage. Three pilot projects are being led by Indigenous Nations to inform this work.</p>
2 Yes	Create an adaptation plan for B.C. that: <ul style="list-style-type: none"> • Clearly outlines government's priorities, roles and responsibilities, and timelines • Identifies the necessary resources for implementation • Integrates with existing adaptation 	CAS will develop and publish a provincial adaptation strategy in 2020 that will address the points in the recommendation. Public consultation is scheduled to begin June 2019. Target Date: Spring 2021 (*Revised from 2020 APPA)	<p>Progress Assessment: Partially Implemented</p> <p>Work Underway: The CleanBC plan commits government to develop a Climate Preparedness and Adaptation Strategy (CPAS) to be released in 2020. Due to extenuating circumstances related to the COVID-19 response, publishing of the strategy was delayed. Throughout 2020, CAS engaged with ministry partners, Indigenous communities and organizations, local governments, and others to receive input on strategy development and identify areas for integration with existing adaptation planning. The first phase of public engagement on the strategy occurred November 2019 to January 2020. Targeted partner and Indigenous engagement on the strategy occurred through Summer and Fall of 2020. An active and ongoing working group composed of representatives from 17 Ministries continues to work towards refining the strategy's proposed actions and ensuring alignment with ministry mandates. The adaptation strategy has been drafted and is expected to be released in Spring 2021. CPAS will now include two phases, 2021/22 and 2022 to 2025.</p>

² For each recommendation, the audited organization should state whether they have accepted the recommendation and plan to implement it fully by typing either "Yes" or "No" under the number of the recommendation.

³ Target date is the date that audited organization expects to have "fully or substantially implemented" the recommendation. If several actions are planned to implement one recommendation, indicate target dates for each if they are different.

⁴ The Select Standing Committee on Public Accounts (PAC) will request that the audited organization provide a yearly update (i.e. completed "Assessment of Progress and Actions Taken" column) until all recommendations are fully implemented or otherwise addressed to the satisfaction of the PAC. This is for the APPA update.

⁵ This action plan and the subsequent updates have not been audited by the OAG. However, at a future date that Office may undertake work to determine whether the entity has implemented the recommendations. The results of that work will be reported in a separate report prepared by the OAG.

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	<p>planning at the ministry level</p> <ul style="list-style-type: none"> • Includes solutions for obstacles identified through the audit • Clearly outlines how government will work with local governments and include them in its development • Clearly outlines how government will work with first nations, and include them in its development • Includes a requirement to refresh every five years. 		
<p>3 Yes</p>	<p>Provide staff with a continuing education program on climate change impacts and adaptation.</p>	<p>Ministries within the scope of the audit have been exploring ways to incorporate climate adaptation into the overall Ministry learning goals, and to support staff in continued education on climate change. All staff are encouraged to take Pacific Institute for Climate Solutions Climate Insights 101 course, or equivalent.</p> <p>Target Date: Ongoing</p> <p>Specific actions include:</p> <p>AFF: Staff are encouraged to take the Environmental Farm Plan Program’s training on climate adaptation; and attend workshops on climate adaptation hosted by professional associations (e.g. BC Institute of Agrologists, Planning Institute, etc.), and research networks (e.g. BC Agricultural Climate Adaptation Research Network).</p> <p>EMBC: Due to a changing climate, the increased frequency of emergencies and disasters is rising; the Assistant Deputy Ministers Committee on Disasters Risk and Emergency Management, co-chaired by EMBC ADMs, leads cross-ministry coordination and collaboration related to disaster risk and emergency management, including training opportunities and exercises. EMBC will also work in</p>	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <p>AFF</p> <ul style="list-style-type: none"> • Members of AFF’s Climate Action Team attended Adaptation Canada 2020, a bi-annual national conference on climate adaptation in February 2020, and are currently enrolled for climate adaptation courses delivered through the Adaptation Learning Network • Since 2019, AFF staff have participated in a Centre for Climate Services coordinated working group aimed at co-developing training resources and tools to build capacity to understand and use climate information • Since 2018, over 150 AFF staff have received adaptation training through various ministry lead and supported initiatives. • A one-hour climate adaptation training module was delivered by AFF’s climate action team on January 14, 2020. Over 65 staff attended the training, which also included a summary of the Preliminary Strategic Climate Risk Assessment. • AFF supported the development of a four-part agricultural climate adaptation education series delivered by the BC Agricultural Climate Adaptation Research Network (ACARN) in February and March of 2019. Ministry staff were encouraged to attend in-person and access the recordings of the seminars as continued education. In 2020, 135 B.C. government staff, primarily from AFF, participated in the

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	<p>partnership with Indigenous knowledge holders about the impact climate change is having on First Nation communities. This learning will inform internal practices at EMBC.</p> <p>ENV: CAS have engaged the Pacific Institute for Climate Solutions (PICS) and Simon Fraser University's Adaptation to Climate Change Team (SFU ACT) to scope opportunities for continuing education for professionals, including staff. CAS have secured funding from Natural Resources Canada (NRCan) for three years of funding through the Building Resilience and Adaptation Capacity and Expertise (BRACE) program.</p> <p>TRAN: has supported and provided education on climate change impacts, adaptation and new ministry policy to various ministry staff groups. Going forward these may be developed for distribution to a wider ministry audience.</p>	<p>provincial workshop of the ACARN, which showcased adaptation research and hosted interactive workshops using a virtual format. The virtual workshop, and adaptation-focused webinars, greatly increased the number of Ministry staff who could participate in these educational and capacity building offerings relative to nine AFF participants in 2019. Topics ranged from climate and weather data sources, to managing pests, soil health and variability in a changing climate https://www.bcacarn.com/educationseries/</p> <p>EMBC</p> <ul style="list-style-type: none"> EMBC pursues an all-of-government approach to building capabilities to prepare for, respond to and recovery from disasters. This includes the development of the next major full- scale earthquake exercise planned for 2022 (Exercise Coastal Response), integrating a broad cross section of participants including local governments, provincial ministries, federal government, First Nations communities, critical infrastructure partners, and nongovernmental organizations. The Initial Planning Meeting (Mar 2019) and first (Feb 2020) and second Tabletop Exercises (Feb 2021) have been completed EMBC has been able to develop strong relationships with Indigenous knowledge holders who are often willing to share their knowledge with staff. <p>ENV</p> <ul style="list-style-type: none"> The scoping study by PICS and SFU ACT is complete. The Adaptation Learning Network: Inspiring Climate Action project (2019-2021) is intended to increase the Province's capacity to adapt to climate change by enhancing the knowledge and skills of professionals, through climate change adaptation continuing professional development and participation in a professional learning community. This project is led by Royal Roads University and co-funded by the NRCan BRACE program and CAS. To date the project has developed and delivered 11 course offerings in climate adaptation topics, developed a draft climate adaptation competency framework, and established an online learning network <p>FLNRORD</p> <ul style="list-style-type: none"> A Webinar Series "Climate Change at a small watershed scale with a focus on Resource Road Stream Crossings" was successfully delivered (Feb 2020) and well received by internal and external participants. The webinar series reviewed climate change tools with a focus on design flood hydrology and provided background for considerations and available climate change information sources for integrating climate change for practitioners. FLNRORD has been tracking progress to meet the March 2019 target since October 2016 in the ministry Climate Change Scorecard. Education resources, both Climate Insights 101, a CBC Podcast series on climate change in BC and a series of staff workshops have been provided to staff to fulfill this goal. As of October 2018, the ministry has reached an overall score of 51%, meaning the ministry is only halfway to meeting its education target. FLNRORD is continuing to ensure staff increase their
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			<p>knowledge of climate change. No future target has been set but a revised target may be set in winter/spring 2021 for future education goals.</p> <p>TRAN</p> <ul style="list-style-type: none"> TRAN Climate Change Technical Circular engineering adaptation policy has been revised and redistributed to staff and provided on public ministry website (completed March 2019) <p>Work Underway:</p> <p>AFF</p> <ul style="list-style-type: none"> Staff are exploring options for developing and delivering updated climate adaptation webinars for staff in 2021/22. <p>ENV</p> <ul style="list-style-type: none"> CAS has entered into a partnership with the Pacific Climate Impacts Consortium to develop guidance support materials and training for practitioners and professionals (including those in local governments, Indigenous communities and organizations, industry, businesses, consultants etc.) on the use and interpretation of climate science data and scenarios in climate risk assessment, adaptation planning and decision making. The Adaptation Learning Network: Inspiring Climate Action project (2019-2021) - Future course offerings are planned and Royal Roads is embarking on a project to investigate the creation of an adaptation-related micro-credential. <p>FLNRORD</p> <ul style="list-style-type: none"> FLNRORD has a Climate Action Plan Community of Practice (CAPCoP), which is comprised of representatives from most regions and business areas across the ministry. CAPCoP gathers monthly to share updates on government-wide and ministry-led climate adaptation initiatives, and provides a forum for sharing climate change related projects or research.
<p>4 Yes</p>	<p>Work with local government and other stakeholders to assess the effectiveness of existing tools and resources for local governments and agricultural producers and act on their findings.</p>	<p>Complete the assessment process underway of Regional Adaptation Strategies (RAS) supported by AFF’s Climate Adaptation Program (2013-2018). Target Date: Complete (*revised from 2019 APPA)</p> <p>Update and refine climate adaptation tools and resources on an ongoing basis as part of the project management and evaluation cycle. Target Date: 2018-2023</p> <p>For new RAS supported under the Canadian Agricultural Partnership (2018-2023), conduct a similar process to review and assess effectiveness of tools and resources supported under the Program. Target Date: 2022/2023</p> <p>Prepare a plan to conduct a scan of local government tools, resources, programs and projects on climate adaptation (BC Climate Action Toolkit). Review plan with</p>	<p>Progress Assessment: Fully Implemented</p> <p>Actions Taken & Discussion:</p> <p>AFF</p> <ul style="list-style-type: none"> AFF through the BC Agriculture & Food Climate Action Initiative (now Climate & Agriculture BC), has assessed progress of the implementation of Regional Adaptation Strategies (RAS) in Delta, the Peace, the Fraser Valley, the Okanagan, and the Cariboo. This process was done in consultation with local governments, agricultural associations, and producers and assessed the progress of strategies that were identified as high priorities in the original plan and prioritize areas of focus for the future. Engagement with stakeholders involved in the Cowichan Valley RAS informed the development of a new RAS plan for Vancouver Island New Regional Adaptation Strategies for Bulkley-Nechako & Fraser-Fort George, and Kootenay & Boundary were completed in the summer of 2019 and for Vancouver Island in 2020. Planning processes took into account learnings from previous progress assessments and involved extensive

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		<p>Green Communities Committee (GCC) (a joint UBCM –Province committee) and obtain endorsement. Target Date: Complete (*revised from 2019 APPA)</p> <p>Continue to work with stakeholders on updating existing materials. Update existing or develop new tools and resources for local government, based on gap analysis conducted in recommendation 15. Target Date: Spring/Summer 2021 (*revised from 2020 APPA)</p>	<p>collaboration, including 21 agricultural organizations and 11 local government partners which provided funding for the local workshops. 21 workshops, focus groups and implementation meetings were held involving 470 participants.</p> <ul style="list-style-type: none"> AFF has funded and helped to design 15 dam safety workshops since 2019 for agricultural producers, delivered by FLNR across the province. In addition to an updated dam safety binder, FLNR has collaborated with AFF to create a new pocketbook tailored to meet agricultural dam owner needs. AFFI’s Climate Change Adaptation Program has funded 18 regional “BC Farm & Ranch Wildfire Preparedness Workshops” since 2018. The workshops are aimed at agricultural producers, wildfire response and emergency personnel, and local government representatives. Locations of workshops held in 2019-20 include McBride, Prince George, 100 Mile House, Keremeos, Merritt, Salmon Arm, Tarrys, and Comox Valley. Based on feedback from workshop participants it was determined that additional instruction was required by producers to complete the planning templates. Two videos were created to supplement the guide and workbook in order to expand reach and promote uptake. The videos are intended to help producers complete key elements of their wildfire plans: creating an operations map and reducing risk to farm assets through fuel mitigation. <p>MUNI</p> <ul style="list-style-type: none"> MUNI received financial support from the Green Communities Committee for its plan to update the ‘BC Climate Action Toolkit’ website. The Toolkit is intended to support local government climate action -focused primarily on GHG emissions reductions. Updates will reflect new approaches to reducing emissions and developing more resilient communities. <p>Work underway:</p> <ul style="list-style-type: none"> MUNI staff are currently updating the ‘BC Climate Action Toolkit’ for local government. It is scheduled to go live in Spring 2021. Ongoing updates of the Toolkit are anticipated in response to feedback received from users, changes and advancements in the field, and as the work associated with Recommendation 15 is completed.
<p>5 Yes</p>	<p>Consider climate change adaptation in its legislation, regulation, approvals and permitting processes.</p>	<p>Ministries within the scope of the audit have been considering climate change adaptation in their legislation, regulation, approvals and permitting processes. Ministries are identifying opportunities to incorporate climate change adaptation whenever legislation or regulation is being drafted, amended or reviewed. Target Date: Ongoing</p> <p><u>Specific actions are arranged by Ministry and include:</u> AFF:</p>	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <p>EMBC</p> <ul style="list-style-type: none"> (1) The Province (EMBC, FLNRORD, ENV) has established the Emergency Management Review Office to coordinate cross government efforts to address the Chapman and Abbott report’s recommendations. A public status report and Action Plan was released in October 2018. Two subsequent public updates on the status of the 108 recommendations were released in April and October 2019. The October 2019 report identified that the Province has responded to many of the 108 recommendations. Work on 49 recommendations is complete; substantial improvements

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		<ol style="list-style-type: none"> 1. Review the recommendations from the independent Advisory Committee on how to incorporate climate change impacts and adaptation consideration into the Agricultural Land Reserve (ALR) and the Agriculture Land Commission (ALC) revitalization. Target Date: Ongoing 2. Review the 'The Future of B. C's Food System' report findings and recommendation by the Food Security Task Force. Target Date: 2020 <p>EMBC:</p> <ol style="list-style-type: none"> 1. The BC Flood and Wildfire Review (Chapman and Abbott report) has delivered recommendations on how to better plan for and respond to future flood and wildfire events. EMBC will look to address climate change related recommendations that are connected to EMBC activities and operations. Target Date: Fall 2020 (*revised from 2019 APPA). 2. In partnership with other ministries, EMBC develops, maintains and implements emergency plans that address priority hazards. EMBC applies a climate adaptation lens to the ongoing review and development of applicable hazard-specific plans, starting with the update to the BC Flood Response Plan (see Rec #9). Target Date: Completed (*revised from 2019 APPA). 3. EMBC will require mitigation funding applications to discuss climate change adaptation as a part of its funding approval process Target Date: Completed (*revised from 2019 APPA) 4. EMBC is committed to modernizing the <i>Emergency Program Act</i> (EPA), with new legislation expected in Spring 2022 . The implications of climate change for emergency legislation and regulation are being considered as part of this effort. Target Date: Spring 2022 (Revised from 2020 APPA) 5. EMBC is undertaking a comprehensive review of how the Province supports community recovery following significant emergency events. The changing natural hazard context due to climate change is being considered as part of this effort. Linkages to other pillars of emergency management are also being considered and integrated. Target Date: Fall 2020 <p>ENV:</p> <ol style="list-style-type: none"> 1. Amendments / Regulation under the <i>Climate Change Accountability Act</i> (replacement for the <i>Greenhouse Gas Reduction Targets Act</i>) will enable the provincial government to seek information from B.C.'s public sector organizations (PSOs) on their adaptation progress. Government will consult PSOs to bring forward the program over the next two years. The information collected will help the province evaluate progress and inform 	<p>have been demonstrated on 31 recommendations; work on 19 recommendations is underway; further analysis and/or discussion is required on 4 recommendations; and 5 recommendations were addressed through alternative approaches</p> <ul style="list-style-type: none"> • (2, 3) EMBC has developed a BC Supplemental Questionnaire requiring applicants to indicate how their proposed project considers climate change adaptation. Communities that provide more thorough answers receive higher evaluation scores. Also, the application process for flood-related funding programs of the Community Emergency Preparedness Fund (CEPF) emphasizes incorporation of climate adaptation in project planning and design. <p>ENV</p> <ul style="list-style-type: none"> • (1) Amendments to the <i>Climate Change Accountability Act</i> were completed in December 2019 requiring an annual minister's accountability report that includes government's progress to assess and manage climate related risks. (ENV) The Climate Change Accountability Report was published December 2020. This is the first report required by the amended <i>Climate Change Accountability Act (December 2019)</i>, and it details progress on a wide range of programs and policies, as well as showing progress to legislated targets. It also includes public sector emissions reporting, progress made on the climate preparedness and adaptation strategy, and outlines our engagement with various groups over the last year. • (5) ENV and FLNRORD commissioned work by the Pacific Climate Impacts Consortium (PCIC) to produce projections of future streamflow for three smaller watersheds; the project has increased their understanding of products that meet the operational needs of provincial water managers. In addition government offered external training on climate change and groundwater recharge to water program technical advisors. • (3) The Investing in Canada Infrastructure Program (ICIP) - Green Infrastructure stream has adaptation embedded in the program objective. • (3) A federal climate lens assessment, which includes mitigation and adaptation, is required prior to approval for all projects within the ICIP-CleanBC Communities Fund and for any project within any of the ICIP streams with a cost greater than \$10 million. MUNI program staff have developed a climate change condition to be applied to the funding agreements for approved projects. Initial intakes and reviews for CleanBC Communities Fund and Environmental Quality are completed. • (3) ICIP application has been developed to include a climate change section which addresses mitigation and adaptation within the application. Climate related responses are assessed during the review process and contribute to the decision-making process. <p>FLNRORD</p> <ul style="list-style-type: none"> • (1) In 2017 and 2018 over 320 FLNRORD staff participated in workshops to evaluate decision points across the ministry where climate change can be incorporated as well as the information requirements and tools needed to make these decisions.
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		<p>necessary policy and program changes to support adaptation progress in BC’s public sector. Target Date: 2020-21 (*revised from 2019 APPA)</p> <ol style="list-style-type: none"> CAS is considering ways TRAN’s policy on <i>Climate Change and Extreme Weather Event Preparedness and Resilience in Engineering Infrastructure Design</i> can be extended to other provincially funded infrastructure. This would require the PSOs to demonstrate they have considered future climate conditions and extreme weather events in the design of new and retrofitted public infrastructure projects. Target Date: 2020 Capital projects funded through the Green Infrastructure Fund receiving over \$10 million will be required to complete a climate resilience assessment for the project. CAS worked with Infrastructure Canada (INFC), MUNI and TRAN on the design, implementation, and administration of the assessment of climate resilience. Target Date: Complete (*revised from 2019 APPA) Evaluate and prioritize development and implementation of tools under the <i>Water Sustainability Act (WSA)</i>. Target Date: Ongoing ENV and FLNRORD will explore the potential to use information about future hydrology (e.g., streamflow, aquifer recharge) in water management decisions. Target Date: ongoing <p>FLNRORD:</p> <ol style="list-style-type: none"> Examine policy options for incorporating a climate change lens in the <i>Forest and Range Practices Act (FRPA)</i>. Target Date: Spring 2021 Implemented a change to the Chief Forester’s standards for seed use to allow consideration of climate change in the FRPA. Target Date: Complete (*revised from 2019 APPA) In 2019, a new objective to “Expand and strengthen climate change mitigation and adaptation activities”, including “...integration of climate change adaptation considerations into the daily business of the Ministry” was added to the FLNRORD Annual Service Plan with the intent to incorporate climate change into all Ministry decision making. Target date: Ongoing <p>MUNI:</p> <ol style="list-style-type: none"> Local government infrastructure grant program now incorporates climate change adaptation into the assessment process. Target Date: Complete MUNI will explore opportunities to strengthen climate change adaptation at the project level through an increased emphasis on adaptation in program criteria and project conditions. Target Date: 2020 	<ul style="list-style-type: none"> (2) Amendments to the Chief Forester Standards for Seed Use were made on April 5, 2018 to include the optional use of Climate Based Seed Transfer when transferring seed for Crown land reforestation. Seed Planning and Registry Applicaton (SPAR) was modified (August 6, 2018) to allow for implementation (uptake) in last year’s (Sowing Year 2019) seedling requests. (2) The CCISS (Climate Change Informed Species Selection) tool assesses suitability of species for a site. It considers multiple potential modelled future climate scenarios and projected changes to biogeoclimatic conditions for the near- and mid-term, and ranks species for suitability. It also provides information to inform planting recommendations and silvicultural prescription. The tool is operational but still in development (beta version). The scientific basis and province-level results have been published in <i>Forest Ecology and Management</i> (Jan 2021). A roadmap to policy implementation is being drafted. (3) The Provincial Flood Emergency Plan (formally known as the BC Flood Response Plan) underwent a thorough review by CAS in March 2018. The updated Provincial Flood Emergency Plan was published in May 2019. (3) The BC Drought Response Plan was reviewed, updated, and published in June 2018. <p>MUNI</p> <ul style="list-style-type: none"> (2, 3) MUNI review of previously identified potential adaptation actions from the Green Communities Committee (GCC) Adaptation Working Group occurred in 2019. Ideas related to the effectiveness of local government land use planning authorities in considering adaptation were an important part of this review. The recommendations from the Adaptation Working Group are informing futher climate adaptation work (e.g., MUNI’s submission to the Climate Action Secretariat for consideration in the Province’s Climate Preparedness and Adaptation Strategy; the work of the UBCM Special Committee on Climate Action, which released its recommendations on how local governments can move towards a low carbon future in December 2020). <p>TRAN</p> <ul style="list-style-type: none"> (1) TRAN Climate Change Technical Circular engineering adaptation policy has been revised and redistributed to staff and provided on public ministry website (completed March 2019). (2) TRAN has engaged with EGBC in reviewing and finalizing the climate change practice manual (originally completed and released December 2016; EGBC revision released July, 2020). (3, 4) TRAN supported the PCIC decision-support climate projection mapping tool (completed March 2019) and instructional videos are provided. Report submitted to NRCan: “Developing a Climate Change Adaptation Interdependency Process with Economic Considerations” Climate adaptation policy has been included in the updated 2019 BC Supplement to Transport Association of Canada - Geometric Design Guide (completed April 2019)
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	<p>3. Based on actions identified by MMUNI and other ministries and the ideas put forward by the Green Communities Committee (GCC), assess adequacy of local government land use planning legislation in considering adaptation. Coordinate with other provincial agencies on any legislation, regulations, approvals or permitting processes that may impact local government capacity and land use planning authorities. Target Date: 2020 onward</p> <p>4. Consider BC Building Code revisions to address specific adaptation priorities (e.g., wildfire). Target Date: 2022-2025 (*revised from 2019 APPA)</p> <p>TRAN:</p> <p>1. TRAN’s Climate Change Technical Circular engineering policy applies to all ministry engineering designed infrastructures and requires climate change adaptation is taken into consideration. Target Date: Complete (*revised from 2019 APPA)</p> <p>2. TRAN engaged with Engineers and Geoscientists of BC (EGBC) to develop climate change practice manual outlining standard of practice, the manual is undergoing final revisions. Target Date: 2020</p> <p>3. TRAN engaged with the Pacific Climate Impacts Consortium (PCIC) in developing a new decision support tool with maps of climate projections to further enhance the way the Ministry addresses climate change impacts within the British Columbia highway system. The “Climate Explorer” tool is available to the public on the PCIC website. Target Date: Complete (*revised from 2019 APPA)</p> <p>4. Development of a decision support tool to include issues of climate adaptation interdependence with other infrastructure owners. Target Date: Complete (*revised from 2020 APPA)</p> <p>5. TRAN developing climate vulnerable culvert identification tool pilot for future CPAS project for climate vulnerable culvert replacement. Target Date: Spring 2022 (Revised from 2020 APPA)</p>	<p>Work underway:</p> <p>AFF</p> <ul style="list-style-type: none"> In January 2021, AFF’s Climate Action Team was reassigned to the new Corporate Policy and Priorities Branch to reinforce the focus on strategic direction and provide stronger oversight for climate action within ministry legislation, regulations and policies. This acts on the Minister of AFF’s mandate letter commitment to support the implementation of CleanBC, BC’s plan for climate action and clean growth. (1) In 2018, the Minister of AFF established an independent Advisory Committee to lead consultations and provide recommendations on how to revitalize the Agricultural Land Reserve (ALR) and the Agriculture Land Commission (ALC). Climate change impacts and adaptation considerations are reflected in the report prepared by the independent Advisory Committee. AFF is continuing to review the recommendations and implement next steps. (2) In January 2020, the Food Security Task Force completed a report with recommendations on developing agri-technologies to support the climate resilience of B.C.’s agriculture sector. AFF is reviewing the recommendations and identifying next steps. In 2021 AFF created the Regenerative Agriculture and Agri-Tech Team to lead this work. <p>AG-OHCS</p> <ul style="list-style-type: none"> (MUNI 4) As part of CleanBC and the AG priority to require new buildings and retrofits to be more energy efficient and cleaner, AG is developing a strategy to reduce greenhouse gas emissions and improve the energy efficiency, seismic, and climate resilience of existing buildings. A draft strategy is expected to be released in fall 2021 based on extensive stakeholder consultation and robust policy analysis. Key areas of focus will include addressing climate risks for buildings related to an increase in extreme weather events, more frequent and severe heat waves, and higher risk of wildfires. This work is being done in collaboration with all levels of government, academic research institutions, Crown corporations, and other relevant stakeholders. (MUNI 4) AG is considering changes to the next edition of the BC Building Code to address overheating risks, based on future climate projections, in new construction. The next edition of the BC Building Code is anticipated in December 2022. <p>EMBC</p> <ul style="list-style-type: none"> (4) EMBC’s Discussion Paper on Modernizing BC’s Emergency Management System was released on October 28, 2019, with comments received by January 31, 2020. Work on this initiative was delayed due to the COVID-19 pandemic. A “What We Heard” report summarizing comments on the Discussion Paper was released in late August 2020. EMBC will bring forward an RFL to the
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			<p>Cabinet Committee on Economy in the coming months, and will reinitiate engagement with partners and stakeholders.</p> <ul style="list-style-type: none"> • (5) Since 2018, EMBC has developed and implemented the Interim Provincial Disaster Recovery Framework to support communities. EMBC is currently developing operational recovery guidelines for use in the 2020 freshet and fire season as required. Working with the City of Grand Forks, EMBC has supported community-led recovery which included a significant mitigation-component including the use of natural infrastructure. <p>ENV</p> <ul style="list-style-type: none"> • (1, 2) Consultation with PSOs and ministries responsible for PSOs (HLTH, EDUC, AEST, CITZs, and FIN) is ongoing to inform policy and regulation development on requirements for PSOs to assess, manage and report on climate risks to public sector buildings and service delivery. • (2) Climate Action Secretariat is working with INFC, MUNI, and TRAN to develop an assessment of climate resilience. While some guidance exists, enhanced guidance and support are needed to assist with the assessment of climate resilience. CAS is working with federal partners to develop a “climate resilience lens” for infrastructure funding programs. Work to advance this action will be addressed as part of the Climate Preparedness and Adaptation Strategy. • (4) ENV is addressing climate change and water scarcity, as appropriate, in evaluating tools and developing operational guidance related to WSA implementation <p>FLNRORD</p> <ul style="list-style-type: none"> • (1, 3) The FLNRORD Joint Executive Directors Committee has endorsed proceeding with policy work to incorporate climate change into the decision-making framework for the Lands, Range and Water program areas; Land Use Planning and the Cumulative Effects Framework. This work is currently underway. • (1) Amendments to Forest and Range Practices Act include the new forest landscape planning regime and the modernization of current forest stewardship related planning provisions in order to manage risks associated with climate change. Proposed amendments include a new Forest Landscape Planning regime which will replace the Forest Stewardship Plan regime and will enable greater inclusion of climate change considerations into tactical forest management planning and subsequent operational activities. In addition to the new Forest Landscape Planning regime, there are other amendments proposed that will enable increased mitigation and adaptation actions. Amendments to FRPA are proposed but the bill has not yet been passed. This is expected to occur in 2021. Following this, regulations will need to be developed to implement the new enabling legislation (target 2021-22). There are also additional amendments being contemplated that will further enable climate change considerations and better manage forest carbon sequestration in the new regime.
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			<ul style="list-style-type: none"> • (3) An update to the 2015-2020 FLNRORD Climate Change Strategy is currently underway for 2021-2025. Release is expected in Spring 2021. FLNRORD is also supporting the government-wide CleanBC Initiative, including the BC Climate Preparedness and Adaptation Strategy currently in development. • (3) FLNRORD has prepared and released (internally) guidance/standards on climate change scenarios, models and timeframes for use in different types of natural resource decision making. • (3) FLNRORD is integrating climate change mitigation and adaptation in Forest Carbon Initiative projects. This work is ongoing through work to intergrate climate change considerations into: Land Use Planning, Water Sustainability Act guide, Cumulative Effects Assessments, Lands Act authorizations and range decisions. Guidance for integrating climate change into Lands Act authorizations is complete and expected to be released in Spring 2021. • (3) Published Together for Wildlife Strategy with climate change resilience and adaptation as underpinning themes. Implementation of this strategy will ensure climate change impacts on wildlife are understood and integrated in to the planning and delivery of stewardship actions. Implementation and management plans for Species and Ecosystems at Risk are done considering multiple species, landscape level connectivity and capturing a mosaic of ecosystem types in managed and designated areas to better ensure ecosystem resiliency as climates change • (3) Updating the 2007 Socio Economic Environmental Assessment (SEEA) Guidance to include climate change guidance for Land Use Planning as well as the acknowledgement of Indigenous Knowledge. • (3) FLNRORD is working to modernize land use planning with a \$16M commitment over three years (2018-19 to 2020-21) to support reconciliation, economic opportunities, and land and resource management challenges in a changing climate. Land use planning tables have been established for 9 projects and FLNRORD is working towards providing policies, guidelines and tools to identify opportunities for climate change integration that will support current and future LUP projects. • (3) Operationally, Engineering Branch incorporates climate change flood risk considerations in design of FSR bridges requiring replacement. Engineering Branch continues to leverage the corporate agreement with FPInnovations to focus on climate change adaptation for resource roads. Engineering Branch is working towards developing guidance and tools to assist practitioners and others throughout the resource road life-cycle, including planning, design, construction, maintenance, and deactivation. This will improve the ability of practitioners and others to identify, assess, and address climate-related vulnerabilities. It is not realistic for all practitioners be knowledgeable experts in this field and provincial-level guidance and tools will provide leadership and coordination and foster synergies with professional associations, other ministries (eg TRAN),
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			<p>researchers, etc. This work is partially implemented, with further work pending proposed for inclusion in the BC Climate Preparedness and Adaptation Strategy</p> <p>TRAN</p> <ul style="list-style-type: none"> • (4) TRAN decision support report to include issues of climate adaptation interdependence with other infrastructure owners (Draft completed April, 2020). Available on TRAN public adaptation website. • (3) TRAN-supported PCIC decision support streamflow projection tool pilot will be reviewed April 2021 for release. TRAN engaged with PCIC for a decision support tool pilot for streamflow projections of the Upper Fraser River to be included in “Climate Explorer”. Other drainage basins can be added in future. • (5) TRAN will expand recent climate vulnerable culvert identification tool that includes GIS mapping capability as pilot for CPAS initiative to identify and replace climate vulnerable provincial culverts.
6. Yes	Create a performance monitoring framework based on the goals, activities and outcomes outlined in the adaptation plan (see recommendation #2).	<p>Develop a monitoring and evaluation framework that tracks B.C.’s progress on implementation of the Climate Preparedness and Adaptation Strategy (CPAS). Target Date: 2021 (*revised from 2020 APPA)</p> <p>Amendments to the <i>Climate Change Accountability Act</i> created the legislative foundation for the province to regularly report on B.C.’s adaptation progress. The monitoring and evaluation framework will inform how the province will measure and report on adaptation progress. Target Date: Fall 2020 (*revised from 2019 APPA)</p>	<p>Progress Assessment: Partially implemented</p> <p>Actions Taken & Discussion: The <i>Climate Change Accountability Act</i> was brought into force in November 2019; with a legislated requirement for an annual provincial progress report for both adaptation and mitigation, starting in 2020. The first <i>Climate Change Accountability Report</i> was published December 2020.</p> <p>Work Underway: Climate Action Secretariat is developing a monitoring and evaluation framework to inform development of progress reporting, including indicators, for the actions outlined in the Climate Preparedness and Adaptation Strategy. The full reporting approach will be implemented for the 2021 Climate Change Accountability Report.</p> <p>Process mapping workshops have been held to identify potential reporting processes and procedures to support meeting the new reporting requirements. Further engagement is planned to ensure indicators are culturally appropriate and measure outcomes of importance to key partners like Indigenous peoples.</p>
7 Yes	Improve public reporting, including providing detailed public reporting on adaptation when completing legislated reporting on mitigation.	<p>The government will publish a public report on provincial climate risks and adaptation progress starting in 2020. The reporting requirements may be extended to public sector organizations. Target Date: 2020</p>	<p>Progress Assessment: Substantially implemented</p> <p>Actions Taken & Discussion: 2019 amendments to the <i>Climate Change Accountability Act</i> require the minister to report annually on government’s progress in assessing and managing climate risks. The Act also requires government to re-determine climate risks for the province every five years</p> <p>The 2020 <i>Climate Change Accountability Report</i> was published December 2020. This is the first report required by the amended <i>Climate Change Accountability Act</i>. The report included a summary of the climate</p>

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			<p>risks identified in the 2019 risk assessment, a high-level summary of adaptation actions taken, and a detailed appendix outlining adaptation actions taken by a number of key government ministries and actions planned for the coming year.</p> <p>The 2019 Climate Change Accountability Report provides information on the potential climatic changes expected, the strategic climate risk assessment and the actions the province had taken on adaptation.</p>
8 Yes	<p>Identify priority unmet climate data needs and fill gaps accordingly. This work should be done in collaboration with network operators as well as with users, such as flood forecasters and climate modellers.</p>	<p>Government continues to work across agencies and with its partners to explore and address needs and gaps in climate data, information and tools.</p> <p>Target Date: Ongoing</p> <p>Specific actions include:</p> <ul style="list-style-type: none"> As part of the Pan-Canadian Framework on Clean Growth and Climate Change, the Government of Canada committed to “Establish a new Canadian Centre for Climate Services (CCCS) to improve access to climate science and regional climate resilience.” Target Date: Complete (*revised from 2019 APPA) FLNRORD, through the BC Wildfire Service (BCWS) has extensive station networks that will be maintained and potentially enhanced as funding becomes available. Target Date: Ongoing The Climate Related Monitoring Program (CRMP) completed a map-based evaluation (gap analysis) of current climate monitoring stations. This evaluation identified key locations (watersheds) for network enhancements to improve the Provincial Climate Data Set. Target Date: Complete Under the CRMP, the province is working with BC Hydro, Rio Tinto ALCAN and regional districts to make long term meteorological data available for professional users. Target Date: Complete (*revised from 2019 APPA) FLNRORD has published an inventory of data and tools for professionals to use when making climate-informed decisions. Work is underway to improve this inventory and identify gaps and tools that need updating or additional data. Tools include a Fish and Wildlife Vulnerability Assessment, Climate Based Seed Transfer, Tree Species Selection Tool, Regional Climate Change Extension Notes, etc. Target Date: Ongoing 	<p>Overall Progress Assessment: Partially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> The Province continues to work closely with other agencies, partners, Pacific Institute for Climate Solutions (PICS) and Pacific Climate Impacts Consortium (PCIC) to identify user needs for climate data and information. Federal government has established the CCCS and developed an online portal providing access to climate science information. As part of this effort, the federal government invested \$1.25M in PCIC to deliver climate services to assist decision makers in preparing for the changing climate. BCWS has developed a new Predictive Services Unit, of which weather is a key data component. New equipment and stations are added incrementally as funding becomes available. The CRMP’s agreement on the Management of Meteorological Networks in BC was renewed by nine agencies including ENV. The meteorological data collected under the CRMP agreement are publicly available through the Provincial Climate Data Set hosted by PCIC. A Technical Report on “Applying Climate Change Information in Resource Management: User Needs Survey” was published in 2019. The report summarizes climate data needs of different user groups. <p>Work underway:</p> <ul style="list-style-type: none"> The CRMP is currently engaging with regional partners and Indigenous Nations to seek feedback on the results of the climate monitoring stations gap analysis. The inventory of data and tools for making climate-informed decisions has been published on the BC government website, and content is updated and refined as new information becomes available. Unmet climate data needs have been identified and work to address the gaps is proposed for inclusion in the Provincial Climate Preparedness and Adaptation Strategy.
9 Yes	<p>As part of their flood risk strategy:</p> <ul style="list-style-type: none"> review roles and responsibilities for flood management in 	<ul style="list-style-type: none"> A clear and concise BC Flood Strategy (formerly, BC Provincial Flood Risk Strategy) is targeted for completion in FY 2020/2021, to articulate: The history of flood management in BC, including indigenous narratives; Input from other levels of government, stakeholders, and First Nations; A vision, principles, and key outcomes for integrated flood management; Strategic directions on corporate priorities Target Date: FY2020/2021 	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> In 2018, a consultant report including recommendations was delivered, addressing initial scoping, planning, information assembly, key issues and investigations, and next steps for the BC Flood Strategy.

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	<p>the province and clarify leadership</p> <ul style="list-style-type: none"> • set clear objectives that target areas of high priority and/or high risk • link funding allocations to areas of high priority and/or high risk • assess current capacity to meet objectives and identify and fill gaps • tie flood mitigation funding for local governments to commitments to address risk at the local level 	<ul style="list-style-type: none"> • Subsequently, more comprehensive plan and program development will need to occur to build a <i>BC Flood Resilience Plan</i>, targeted for completion by 2022. This will clarify details on roles, responsibilities, governance, funding, capacity, objectives and targets, spatial priorities, as well as the timing and sequencing of integrated flood risk management actions, operations, and projects. Target Date: FY2021/2022 • EMBC provided approximately \$1M in funding to the Fraser Basin Council to develop a regional flood management strategy for the lower mainland. Phase 2 is expected to be completed in 2019. Target Date: Complete (*revised from 2019 APPA) • EMBC’s Disaster Mitigation Unit (DMU) evaluates project applications for flood mitigation funding programs such as the National Disaster Mitigation Program (NDMP) (~\$75M) and the Community Emergency Preparedness Fund (CEPF) (~\$23M). As part of its evaluation process, DMU has developed evaluation criteria to tie flood mitigation funding for local governments to commitments to address climate risk at the local level. Target Date: Complete (*revised from 2019 APPA) • EMBC is leading the update to the BC Flood Response Plan, which will clarify roles & responsibilities for flood response in a changing climate. Target Date: Complete (*revised from 2019 APPA) 	<ul style="list-style-type: none"> • In 2019, the Province provided a grant to the Fraser Basin Council to coordinate and manage expert teams to conduct further investigations on provincial flood strategies, planning, and implementation and developed the scope of a renewed BC Flood Strategy. These investigations have now reached substantial completion and address: governance, forecasting, flood hazard and risk assessment, structural vs. non-structural flood mitigation approaches, partnerships, response, recovery, and resourcing. • In 2019, FLNRORD Water Management Branch and staff from several Ministries and work units – including Emergency Management BC (EMBC) and the Climate Action Secretariat (CAS) – collaborated on a project charter for the BC Flood Strategy. • During fall and winter 2019/2020, engagements were led to gather input on flood risks from local governments (UBCM Annual Convention); indigenous communities (Indigenous Climate Forum); the public (EMBC <i>Emergency Program Act</i> modernization process; CAS <i>Climate Ready</i> public web portal), as well as other stakeholders (e.g., Fraser Basin Council’s Lower Mainland Flood Risk Strategy). FLNRORD convened a cross-ministry Working Group in 2020 with representatives from 7 Ministries to work together with monthly workshops to develop a <i>Draft Discussion Paper</i> for internal review. An additional 80+ provincial staff were engaged on the internal Draft Discussion Paper in December 2020. • Engagement with Indigenous communities has occurred from Dec.2020-Feb.2021, facilitated by Alderhill Planning Inc. The goal is to try and indigenize the Discussion Paper prior to external engagement and public release. • For NDMP projects, applications for funding contain a compulsory questionnaire for BC applicants requiring applicants to indicate how their proposed project considers climate change adaptation. NDMP was extended by Public Safety Canada in fall 2020 with \$5 million to complete previously approved projects delayed due to COVID and a 6th intake for flood risk assessments, flood mapping and mitigation planning. EMBC initiated an accelerated call for proposals and has submitted 25 proposals (including 9 flood mapping projects by communities and 1 LiDAR collection project by GeoBC). • The Disaster Mitigation Unit has updated the CEPF application form to include questions that allow the applicant to discuss how the project will address climate risk at the local level. • The update of the BC Flood Response Plan to the <u>Provincial Flood Emergency Plan</u> (FEP) has transformed it to a plan that encompasses all four pillars of emergency management and was published in May 2019. A cross-ministry working group was established that also included federal partners, local authorities, and First Nations representation. • The Provincial FEP defines the roles and responsibilities of local authorities, First Nations, and Provincial ministries before, during, and after a flooding emergency, is in alignment with the Interim Provincial Disaster Recovery Framework and has been reviewed from a climate adaptation perspective. The Plan reflects the new Provincial Governance Structure, including the Ministers’-
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			<p>Deputies' Emergency Council (M-DEC), Deputy Ministers' Committee on Emergency Management (DMCEM) and Assistant DMCEM.</p> <p>Work underway:</p> <ul style="list-style-type: none"> Water Management Branch has started working with the Citizen Engagement team on a Partnership Agreement, to conduct external stakeholder and public engagement on the Discussion paper using govTogetherBC tools in Spring 2021. A Discussion Paper has been developed and engagement continues toward a final BC Flood Strategy in 2021. The BC Flood Strategy targeted for completion in 2021 will include vision, principles and outcomes for flood management in BC. Up-to-date flood mapping is key to understanding flood risk, which aligns with the Sendai Framework for Disaster Risk Reduction. FLNRORD staff continue to participate in several parallel federal government initiatives, including the federal-provincial Task Force on Flood Insurance and Relocation. Completion and implementation activities identified for FY 21/22 are proposed for inclusion in the BC Climate Preparedness and Adaptation Strategy and would accelerate project completion.
<p>10 Yes</p>	<p>Create a flood plain and hazard mapping program that:</p> <ul style="list-style-type: none"> incorporates the effects of climate change and land-use change provides mapping standards with ongoing updates has expertise available for local governments to draw upon 	<p>Background – Legislative changes in 2003 and 2004 transferred responsibility for developing flood and hazard maps from the province to local governments. Since then, the role of the Province has been to provide guidelines for local governments to consider, technical support, and funding when it becomes available.</p> <ul style="list-style-type: none"> Current mapping guidelines will be reviewed every 10 years (or when substantial new science dictates) to ensure effects of climate change are properly considered. Target Date: Ongoing Through funding support from EMBC, GeoBC is conducting and assisting with Light Detection and Ranging (LIDAR) mapping for Vancouver Island (planned), the Lower Mainland (complete), the Okanagan (complete), and the Kootenays (planned). Target Date: Fall 2021 Floodplain mapping will be considered in the BC Flood Strategy (formerly, Provincial Flood Risk Strategy) (see rec. #9) and BC's Climate Preparedness and Adaptation Strategy (rec. #2). Target Date: 2020-22 	<p>Progress Assessment: Partially implemented</p> <p>Actions taken and discussion:</p> <ul style="list-style-type: none"> EMBC-funded LiDAR and mitigation funding for developing flood maps for many local authorities and First Nations in the Okanagan basin, culminating in the launch of the website www.OkanaganFloodStory.ca, which is available to assist residents and local governments to understand and prepare for potential flooding <p>Work Underway:</p> <ul style="list-style-type: none"> LiDAR acquisition program - led by GeoBC - continues to make progress in coverage and expanded areas being considered across B.C. Existing flown LiDAR data is available to local authorities and First Nations to aid in floodplain mapping, through a data use agreement with GeoBC. Several provincial and federal funding programs have been established to provide funding for local governments and First Nations to undertake floodplain mapping and related studies. However, progress to date has been limited to replace the outdated floodplain maps and fill gaps. The proposed BC Flood Strategy (see recommendation 9) provides a strategic path forwards for the future with respect to floodplain mapping; however, the strategy has not been completed, funding has not been secured for implementation, and it will take sufficient time and resources to build out adequately. Actions to accelerate creating a more robust and modern provincial floodplain mapping program are proposed for inclusion in the BC Climate Preparedness and Adaptation Strategy.

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			<ul style="list-style-type: none"> • The Province has contracted Fraser Basin Council (FBC) to review the status, inventory, and adequacy of floodplain mapping in BC. In addition, FBC will review the ability and efficiency of local governments to be responsible for floodplain mapping. • Provincial staff continue to review the need to update Provincial guidelines, and participate in dialogue regularly with professional organizations and the federal government through multiple committees, projects, and venues to contribute to and collaborate on professional practice for cutting edge flood mapping reflecting B.C.- specific conditions. Implementation activities identified are proposed for inclusion in the BC Climate Preparedness and Adaptation Strategy. • The Province and the federal government are discussing the recent federal NRCAN Mandate Letter which included the commitment to 'Work with the Minister of Natural Resources and provinces and territories to complete all flood maps in Canada'. The Province will work with the federal government to explore a sustainable floodplain mapping program in BC and the requirements for standardized flood mapping practices across Canada. • The Province is exploring various avenues and parallel initiatives led by the government of Canada. The Province continues to strive to work with the federal government to build a sustainable and fully funded floodplain mapping program that meets the needs of BC. • Where resources and timing allow, provincial staff resources continue to provide advice to local governments on flood mapping and hydraulic models.
<p>11 Yes</p>	<p>Conduct and support research into climate change and wildfire behaviour and incorporate findings into BC Wildfire Service planning.</p>	<ul style="list-style-type: none"> • FLNRORD has an existing research program. BC Wildfire Service (BCWS) continues to collaborate with the Western Partnership for Wildland Fire Science, the Canadian Forest Service, and B.C. academics on research. Pan-Canadian research is currently under development through the National Blueprint on Wildland Fire Science. BCWS is developing a database of research to help identify gaps and opportunities. Target Date: Ongoing • To expand its research capacity, the BCWS has hired a research coordinator and is working with the federal and provincial governments on the National Blueprint for Wildland Fire Science. The research coordinator will set the foundation for BC's participation for further research through the cross-Canada Blueprint and interact between the various research entities. Target Date: Complete (*revised from 2019 APPA) 	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> • BC has undertaken an inventory of research, initiated the development of a database and has identified local research gaps for action. Additionally, BC contributed to the development of the Blueprint for Science and is working with partners to advance research within BC, western Canada and nationally. Our research priorities are aligned with the BCWS strategic direction and are reflected as such in the Strategic Plan. • BCWS hired a Research and Innovation Senior Officer over a year ago and has also created additional capacity through a Research Officer and 3 Research Analysts. Through the Canada Wildfire and collaboration with other National/Federal agencies, BCWS has benefited from cross-jurisdictional research to support our priorities. BCWS has also partnered with EMBC, Jobs, Economic Development and Competitiveness (JTT) and Information, Innovation and Technology (IIT) and other Emergency Management agencies to advance Research and Innovation through the Emergency Management Tech Cluster. • BCWS has partnered with a number of Universities, such as; UBC, UoA, UNBC, Laurentian, TRU and others in collaboration through Canada Wildfire. Research priorities are in alignment with the BCWS strategic direction and are reflected as such in the Strategic Plan. • BCWS, in partnership with Emergency Management BC has established an Emergency Management Research Chair at Thompson River University with an emphasis on predictive services for wildfire.

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			<ul style="list-style-type: none"> BCWS has been working closely with NRCan and Canada Wildfire to advance Canada’s Blueprint for Fire Science, including; health, wellness, safety, wildland fire research, equipment and technology and social/human behavioural research. <p>Work underway:</p> <ul style="list-style-type: none"> BCWS continues to identify opportunities for research collaboration as it aligns with the Blueprint for Science and has specifically initiated research projects tied to presumptive diseases (i.e., wildland firefighter smoke inhalation impacts) and psychological and physiological impacts (i.e., wildland firefighter stress and fatigue). BCWS has partnered with a number of Universities, such as; UBC, UoA, UNBC, Laurentian, and others in collaboration through the Western Partnership.
<p>12 Yes</p>	<p>Create an overall strategy to address hazardous fuel risks that:</p> <ul style="list-style-type: none"> Uses a risk-based approach when allocating funds to reduce wildfire hazard Ties wildfire mitigation funding for local governments to commitments to address risk at the local level 	<ul style="list-style-type: none"> The Province has completed a review into the wildfires (and floods) of 2017. Internal reviews of the 2017 wildfire season are also underway. BCWS is implementing new structures to incorporate the recommendations into programs and procedures. BCWS is also working with Emergency Management BC to advance preparedness and cooperation during fire (and flood) events. Target Date: Ongoing The province is taking immediate steps to develop a comprehensive wildfire risk reduction strategy, with a specific focus on prevention, preparedness and fuel reduction. Prioritization will occur by key value, with objectives around resilience. Work is also underway to improve risk management. Target Date: Ongoing BCWS has hired a senior manager to coordinate stakeholder engagement and work specifically with First Nations, which includes the incorporation of traditional knowledge. Target Date: Complete (*revised from 2019 APPA) The Province has made \$235M available through the Forest Enhancement Society of BC (FESBC) to enhance forest health, ecosystems and wildfire prevention. Target Date: Ongoing FLNRORD regularly undertakes ecosystem restoration works and rehabilitation of Crown land impacted by wildfires (and flooding). Target Date: Ongoing Since 2004, over \$78M has been made available through the Strategic Wildfire Prevention Initiative (SWPI) to local authorities and First Nations to undertake community wildfire planning, fuel treatments and FireSmart activities in the wildland urban interface (WUI). Target Date: Complete (*revised from 2019 APPA) The results of the provincial review of 2017 wildfire and flood response will inform increased coordination between the UBCM Community Wildfire Protection Plan funding stream, FES and other funding sources and to ensure 	<p>Progress Assessment: Partially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> The Abbott Chapman Report and After Action Reviews have been completed, and recommendations are currently being implemented. While some recommendations were implemented immediately, many required detailed analysis or approvals prior to implementation. An Executive Lead and office has been initiated under EMBC to assist with coordination of work under the After Action Reviews. The target date for receiving the Independent After Action Review has been met, while implementation will continue for several years. BCWS has adopted a continuous improvement model, to capture lessons learned from subsequent After Action reviews, and to increase the effectiveness of the substantive changes implemented The BCWS publicly released the Provincial Strategic Threat Analysis (PSTA) in the Summer, 2019. This information provides a multitude of variables related to fire threat (e.g. fuel type, topography, past fire behaviour) to determine broad based classes of fire threat to better inform decisions on fire prevention investments and activities. BCWS has hired a Director, Partnerships and Indigenous Relations and has built and resourced a new structure (senior management, engagement specialist) to increase and maintain engagement with Indigenous persons, communities and stakeholders. BCWS has launched the new Community Resiliency Investment Initiative (CRI) to support Indigenous and non-Indigenous communities in B.C. to become more resilient to the impacts of wildfire. This is achieved by providing funding for a broad suite of eligible activities that fall within the seven FireSmart disciplines. In addition, the CRI program is also focused on activities to reduce the impacts of wildfire to critical infrastructure and mitigate economic disruption; prioritizing communications, energy, and transportation networks. The new CRI was designed to streamline funding sources and application techniques. BCWS, in conjunction with UBCM and First Nations Emergency Services Society, are consulting with communities to improve the Community Wildfire Protection Plan process in BC. This is a \$60 million dollar program with an annual intake.

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		<p>smoother function for local governments. Target Date: Complete / Ongoing (*revised from 2019 APPA)</p> <ul style="list-style-type: none"> The new Community Resiliency Investment Program (formerly, Wildfire Resiliency Initiative (WRI)) was announced in the 2018 budget and will provide funding to local authorities and Indigenous Communities for the development and implementation of community fire risk, prevention and response plans. The WRI has been structured to incorporate recommendations from the 2017 flood and fire after action reviews. The WRI also provides funding to identify and address landscape level provincial priorities to support economic, environmental and forest resiliency based on risk. Target Date: Complete (*revised from 2019 APPA) 	<p>Work underway:</p> <ul style="list-style-type: none"> The Province is working on the development of a comprehensive wildfire risk reduction strategy. The cornerstone of the strategy is the development of the CRI. BCWS is developing a new Cultural and Prescribed Fire Program to guide the implementation of prescribed fire strategies to mitigate wildfire threat and improve ecosystem health and vitality. The Province continues to work with the Forest Enhancement Society to enhance forest health. The Province continues to undertake ecosystem restoration works and rehabilitation as part of the wildfire and freshet recovery process.
13 Yes	Create additional educational materials and incentives for the public that focus on behavioural change to reduce wildfire hazard.	<ul style="list-style-type: none"> BCWS has initiated BC FireSmart Committee (BCWS, UBCM, Fire Commissioner, Fire Chiefs, FN Social Services, Academia). The new engagement and communications specialist is helping BCWS create additional educational materials, policy material, workshops, and public education campaigns to increase awareness and education. Target Date: Ongoing PreparedBC, EMBC’s public education program, is incorporating climate change into its core materials as part of a staged refresh, including the Wildfire Preparedness Guide (released last July) and the Flood Preparedness Guide (planned for release this spring 2020). In addition, climate change is raised in the refreshed Master of Disaster program that launched in fall of 2019 and targets grades 4 to 8. Target Date: 2020 BCWS, in collaboration with provincial and territorial colleagues continues to lead the implementation of the Canadian Wildland Fire Strategy (CWFS) and Investment Strategy to advance wildfire resiliency and integration including climate change, research, landscape level planning, public education and awareness and response capacity. Target Date: Ongoing 	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> The BC FireSmart Committee is focussing on public education, engagement and incentives for participation in the seven disciplines of FireSmart. Funding supports for FireSmart investments are included within the CRI. The BC FireSmart Committee has adopted a phased approach and will continue to expand efforts and priorities as the committee matures. Launch of the refreshed Master of Disaster Program in Fall 2019 for grades 4 to 8, release of the Wildfire Preparedness Guide in July 2019, release of the Flood Preparedness Guide in Spring 2020. BCWS continues to co-chair the implementation of the Canadian Wildland Fire Strategy (CWFS) with NRCAN. In 2018, the Federal government included wildfire mitigation works (natural infrastructure) as an eligible expense under the new Disaster Mitigation Adaptation Fund under Infrastructure Canada. BC and the other Provinces and Territories continue to work with the federal government to advance the CWFS. In 2019, the Canadian Council of Forest Ministers (CCFM) endorsed a “whole of government” approach to transform wildland fire management in Canada. BC and the other Provinces and Territories continue to work with the federal government to increase integration as a mechanism to advance the objectives within the CWFS. <p>Work underway:</p> <ul style="list-style-type: none"> An update to remaining PreparedBC materials will include a climate change perspective. An advisory group of subject matter experts will be created including representatives from CAS.
14 Yes	Complete its work on a proactive drought management strategy, including an assessment of potential risks to the	<p>Actions completed, underway, or planned to support Drought Strategy development include:</p> <ul style="list-style-type: none"> Evaluation of the current status of provincial drought preparedness and response processes; 	<p>Progress Assessment: Partially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> An annual review of provincial drought response is standard procedure as part of an ongoing cycle of business improvement (FLNRORD and ENV). ENV has synthesized information about climate change impacts on hydrological systems in B.C. and on periods of low streamflow, the economic impacts of

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	<p>province's water resources, and efficacy of potential strategies to manage them.</p>	<ul style="list-style-type: none"> Assessment of drought risks and vulnerabilities in BC, including to water resources; Identification of policies and programs that would enhance provincial government drought preparedness and response and increase the capacity of communities, Indigenous peoples, businesses, and industries to prepare for and respond to drought. Engagement with Indigenous groups, stakeholders and government, and finalization of the strategy; <p>Target Date: TBD Pending resourcing decisions (*revised from 2019 APPA).</p>	<p>drought in B.C., has developed two drought scenarios, and elicited expert opinion on the likelihood and consequences of these scenarios to better understand provincial drought risk.</p> <ul style="list-style-type: none"> Water Protection & Sustainability Branch (WPSB) led an internal-to-government process to identify existing policies and programs to address drought response and preparedness, gaps, and additional actions. Input from this process was synthesized in a draft Drought Strategy reviewed by the Interagency Drought Working Group (IADWG). Recommendations address: risk assessment; data and knowledge; government and community capacity; supply and demand management; and water for aquatic ecosystems. WPSB created a presentation for FLNRORD regarding "Managing Water in a Changing Climate: The Role of Water Law". <p>Work underway:</p> <ul style="list-style-type: none"> WPSB led additional engagement within government on drought preparedness in 2019. Indigenous engagement on proactive drought management was identified as a priority in 2018 and is integrated with ongoing engagement on water policy and climate change preparedness. CAS continues to engage with Indigenous nations to better understand the impacts of climate change – including water scarcity events – and potential preparedness measures. ENV continues to monitor <i>Water Sustainability Act</i> (WSA) implementation to identify the need for new WSA provisions or operational policies to support drought response, preparedness, mitigation and recovery. Implementation of activities that support proactive drought management is ongoing or underway. This includes recommending actions to improve the provincial hydrometric network and to develop additional regulatory tools under the WSA to increase capacity for adaptive management. For example, WPSB and other ministries have identified initiatives related to water scarcity for inclusion in the provincial Climate Preparedness and Adaptation Strategy.
<p>15 Yes</p>	<p>Assess more fully the challenges facing local governments around climate change adaptation, identify priority areas and act on the findings.</p>	<p>1. Assess challenges Review the range of local government climate adaptation challenges, building on:</p> <ul style="list-style-type: none"> Work done by the joint UBCM-Province Green Communities Committee (GCC) Adaptation Working Group in 2017. In-house knowledge Work currently being done in the context of policy fellow research on potential for planning and land use strategies to improve community resilience to flood and wildfire hazards MUNI participation in cross-ministry committees and working groups <p>Share the results of this review with the GCC. Target Date: Spring 2020 (Revised from 2019 APPA)</p>	<p>Overall Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion:</p> <ul style="list-style-type: none"> An in-house review of previously identified potential adaptation challenges and ideas was completed. MUNI completed its work with the joint BC-Union of BC Municipalities (UBCM)-MUNI Green Communities Committee (GCC) Adaptation Working Group (WG) in 2019 to develop recommendations to support local and provincial government climate change adaptation efforts. Next steps to be determined through further discussions with the GCC <ul style="list-style-type: none"> The recommendations developed by the 2019 Adaptation Working Group informed MUNI's input to the Province's Climate Preparedness and Adaptation Strategy. These recommendations also informed the work of the UBCM Special Committee on Climate Action which developed recommendations on how local governments can move towards a low carbon future.

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		<p>2. Identify priorities The results of the in-house review were considered by the GCC Adaptation Working Group in 2019 and their recommendations, including priorities, will be provided to the GCC for consideration. Target Date: Spring 2021 (Revised from 2020 APPA)</p> <p>3. Take action on findings MUNI anticipates that specific initiatives to address the challenges identified by local governments and priorities to support further action will also be identified through the work of the UBCM Special Committee on Climate Action and the Province’s Climate Preparedness and Adaptation Strategy process that is being led by CAS. Target Date: 2022 (Revised from 2020 APPA)</p>	<ul style="list-style-type: none"> A Mitacs fellow’s draft report on opportunities for reducing flood and wildfire risks in BC has been completed and is being considered by the ministry. Recommendations from the draft report were taken into account in adaptation and emergency management related initiatives that are being supported by the ministry (e.g. the Province’s Climate Preparedness and Adaptation Strategy; Emergency Management BC’s initiative to modernize B.C.’s emergency management legislation). <p>Work Underway:</p> <ul style="list-style-type: none"> MUNI staff continue to participate in a variety of cross-government/agency committees and working groups related to adaptation and resilience (e.g., BC Flood Strategy; and the UBCM Special Committee on Climate Action). Most of this work is on an ongoing basis. The information gained from these interactions is informing a variety of adaptation related work being undertaken by the ministry. Pending approval and direction by government, MUNI will work to advance priority actions identified in the Climate Preparedness and Adaptation Strategy.
<p>16 Yes</p>	<p>Create a clear, measurable plan to meet legislated targets, including clear accountabilities, emission estimates and baselines, resources, timelines, and interim targets. Government should also consider co-benefits with adaptation.</p>	<p>The province will establish sectoral emission reduction targets by March 31, 2021 and release a detailed roadmap to the 2030 targets in fall 2021. Target Date: 2021 (*revised from 2020 APPA)</p>	<p>Progress Assessment: Substantially Implemented</p> <p>Actions Taken & Discussion: The CleanBC plan released on December 5, 2018 was developed as a pathway to achieve the Province’s legislated climate targets of reducing greenhouse gas (GHG) emissions by 40% by the year 2030, based on 2007 levels. The plan and annual reports include clear accountabilities, emissions estimates, baselines, timelines and interim targets. The plan described and quantified measures to eliminate 18.9 megatonnes of carbon dioxide equivalent (MtCO₂e), 75% of the 2030 target. The <i>Climate Change Accountability Act</i> was amended in November 2019 to require interim and sectoral targets and clear accountability through an annual Accountability Report, a legislated requirement to have an external advisory council, the setting of interim and sectoral targets and authorities to set targets and requirements for public sector action in both GHG mitigation and climate risk management.</p> <ul style="list-style-type: none"> The legislated Climate Solutions Council was established in February 2020 and provided the government with four letters of advice and an annual summary report through 2020 which are published here. The first legislated Climate Change Accountability Report was published in December 2020. The report provides an update to the CleanBC plan outcomes, reports on progress, and estimates that based on current modelling, existing CleanBC actions will get the province between 56% and 72% towards the 2030 target. This change in expected emissions reductions is due in large part to methodology changes and new information contained in the 2018 provincial emissions inventory that resulted in a lower 2007 baseline emissions level. The Accountability Report contains information on both GHG mitigation and climate change adaptation. In December 2020, the Province established an interim GHG target of a 16% reduction over 2007 levels by 2025; and published a Discussion Paper proposing approaches and options on setting the sectoral targets. The Province has conducted targeted engagement with Indigenous, industry,

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			<p>environmental and sectoral groups to inform the establishment of targets. In addition the Province continues to use emissions and economic modelling to better understand where reductions could be the most cost-effective to inform both the sectoral targets and the roadmap to 2030.</p> <p>StrongerBC, the Provinces COVID-19 recovery plan released in September 2020, had CleanBC at it's centre and over \$220m of spending plans across projects that supported recovery while simultaneously reducing GHGs or mitigating climate risks.</p> <p>Work Underway: Government will, as required by the CCAA, set sectoral targets in March 2021. Government is developing a detailed roadmap to meeting the 2030 targets in B.C. The roadmap:</p> <ul style="list-style-type: none"> • was delayed in 2020 due to COVID-19 and the election period. • will clearly illustrate pathways to enable B.C. to meet it's legislated targets and include clear accountabilities for ministries and partners involved. Ongoing engagement with Indigenous peoples and on equity principles will help inform priorities for action in the roadmap. • will be contextualized in global and local landscape changes since CleanBC was launched as well as aligning with the Province's new commitment to net zero emissions by 2050.
17 Yes	Publish information regarding its use of offsets within the provincial inventory to provide clarity and consistency with the progress to targets report.	Government will enhance the information in the 2018 progress-to-targets reporting regarding the use of offsets. Target Date: Complete (*revised from 2019 APPA)	<p>Progress Assessment: Fully Implemented</p> <p>Actions Taken & Discussion: The Province released the 2018 progress-to-targets on Dec 5, 2018 and included an appendix with enhanced information regarding the use of offsets and the reconciliation to the Provincial Inventory. The use of offsets as described continues in the first Climate Change Accountability Report, released in February 2020 (a replacement for Progress-to-Targets Reports).</p>

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