## The Protection of Drinking Water Released [07/19]

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PAC Meeting Plan <sup>1</sup>	[17/12/19]	Prepared by: Tim Lambert, A/Executive Director, Population and Public Health Division, Ministry of Health; Joanne Edwards, Office of the Provincial Health Officer, Ministry of Health	Reviewed by: Stephen Brown, Deputy Minister of Health; Dr. Bonnie Henry, Provincial Health Officer, Office of the Provincial Health Officer, Ministry of Health; Lorie Hrycuik, Executive Lead, Population and Public Health Division, Ministry of Health
1 <sup>st</sup> APPA Update	[24/03/21]	Prepared by: Trish Sterloff, A/Executive Director, Population and Public Health Division, Ministry of Health; Joanne Edwards, Office of the Provincial Health Officer, Ministry of Health	Reviewed by: Stephen Brown, Deputy Minister of Health; Dr. Bonnie Henry, Provincial Health Officer, Office of the Provincial Health Officer, Dr. Martin Lavoie, Deputy Provincial Health Officer, Office of the Provincial Health Officer, Ministry of Health; Lorie Hrycuik, Executive Lead, Population and Public Health Division, Ministry of Health
2 <sup>nd</sup> APPA Update	[DD/MM/YY]	Prepared by: [Name], [Organization Name]	Reviewed by: [Name of Deputy Minister or Assistant Deputy Minister]

Rec. # Accepted? Yes / No <sup>2</sup>	OAG Recommendations	Actions Planned & Target Date(s) <sup>3</sup>	Assessment of Progress to date <sup>4</sup> and Actions Taken <sup>5</sup> (APPA update)
163/10	Include each recommendation from the OAG report on a separate row	Briefly describe the action(s) you plan to take to address the recommendation. <b>Note</b> : If you have <u>not</u> accepted the recommendation, explain your rational for not accepting the recommendation; this may include any alternative actions you will take and how those actions mitigate the risk underlying the OAG recommendation.	<ul> <li>Progress Assessment: "Fully or substantially implemented," Partially implemented" or "No action taken"</li> <li>Actions Taken &amp; Discussion: This section provides you an opportunity to describe the actions that you have taken, to fully implement the OAG recommendation.</li> </ul>

<sup>&</sup>lt;sup>1</sup> 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)

<sup>&</sup>lt;sup>2</sup> For each recommendation, the audited organization should state whether or not they have accepted the recommendation and plan to implement it fully by typing either "Yes" or "No" under the number of the recommendation.

<sup>&</sup>lt;sup>3</sup> 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.

<sup>&</sup>lt;sup>4</sup>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.

<sup>&</sup>lt;sup>5</sup> 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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		(Note: If your original "Actions Planned" description requires revision in subsequent APPA updates, please identify as "Revised" where necessary.) Target Date: dd/mm/yyyy	Also include any relevant comments that will help PAC members understand your progress to date and your assessment of that progress. <b>Note:</b> If you have <u>not</u> accepted the OAG recommendation <b>and</b> have planned alternative actions, assess your progress as above and describe the actions that you have taken.
Yes	Recommendation 1: (HLTH) In conjunction with partner ministries lead a review of	The Ministry of Health (HLTH) will lead a review on legislation and regulations that affects drinking water and develop recommendations to: clarify roles and responsibilities; addresses health hazards including small water systems; and, identify a cross government approach to ensure safe drinking water for government's consideration.	RECOMMENDATION 1: PARTIALLY IMPLEMENTED Action 1 Progress Assessment: Partially Implemented
	ministries lead a review of legislation and regulations that affect drinking water to ensure that legislators are informed of risks and legislative gaps that may affect government's commitments are addressed. These commitments include: a) clear lines of responsibility b) safety of drinking water as the first priority in decision making c) preventative rather than reactive approaches in addressing health hazards d) tools that mitigate risks e) controls to ensure that small water systems	<ul> <li>Action 1: HLTH will, in collaboration with its cross-ministry partners and the Provincial Health Officer (PHO), and further to obligations with respect to UNDRIP, lead a formal review of policy and legislation to develop recommendations for Government's consideration on the improvements that can be made to further protect drinking water.</li> <li>The actions are as follows:</li> <li>1) Consult with Deputy Ministers (DMs) from key ministries with responsibilities in source water protection, creation of drinking water systems, and provision of drinking water in the province, and the PHO, to discuss and identify key pieces of legislation for inclusion in the review (e.g., Drinking Water Protection Act, Water Sustainability Act, Local Government Act, Public Health Act, etc.) (January2020/February 2020).</li> <li>2) Conduct a review in line with DM recommendations and in consultation with the key ministries, PHO, partners, and non-government stakeholders who hold accountability for legislation in the review (March 2020 to July 2020).</li> <li>Through the review, identify gaps, overlaps, risks, and hazards in the existing framework (March 2020 to May 2020).</li> <li>Consult with government agencies and non-government stakeholders to verify findings and the outcomes to inform the development of the recommendations (June 2020/July 2020 - Revised: SEPTEMBER 2021/OCTOBER 2021).</li> </ul>	<ul> <li>Actions Taken &amp; Discussion:</li> <li>1) Complete: HLTH undertook a consultation with Deputy Ministers (DM) from partner ministries with responsibilities in protecting source water in February 2020 to engage and seek direction.</li> <li>2) In Progress: A contractor was hired to undertake a comprehensive legislative review on all statutes and regulations that impact water protection in the province, a literature review, as well as stakeholder consultation focused on source water protection. The outcome of these three actions were completed in March 2021 outlined in the consultant report. The report included findings and preliminary recommendations based on the outcome of the work.</li> <li>Due to the announcement of the COVID-19 pandemic in March 2020, engagement with partner ministries and the Office of the Provincial Health Officer was put on hold due to limited capacity for the Ministry of Health (HLTH) to engage, as well as other ministries with the priority focused on the pandemic response.</li> <li>In January 2021, HLTH established a cross-government Executive Directors Steering Committee on Drinking Water (EDSC-DW) to advance the actions, with participation from the Office of the Provincial Health Officer (OPHO), partner ministries in the natural resource sector, and the Ministry of Municipal Affairs. Consultation and engagement will health authorities will occur starting in Spring 2021. The EDSC-DW will review the consultant report</li> </ul>

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	provide safe drinking water and that the creation of unsustainable small water systems is limited	<ol> <li>Re-engage with the DMs to provide an overview of the findings and the proposed recommendations for review and feedback (August 2020/September 2020 - Revised: NOVEMBER 2021/DECEMBER 2021).</li> </ol>	findings and assist in developing recommendations for Deputy Ministers and eventually government consideration, that further refine lines of responsibilities, including further clarification of provincial leadership where required, and strengthen decision making to protect drinking water in the province.
		<ol> <li>Confirm the recommendations for government consideration on options/strategies (October 2020 - Revised: DECEMBER 2021).</li> <li>Present the comprehensive review and the proposed recommendations to address gaps, hazards, and issues of accountabilities for Government consideration (November 2020 - Revised: JANUARY 2022).</li> </ol>	As per its Terms of Reference, the EDSC-DW will assist in advancing the other recommendations outlined in the Action Plan through ongoing coordination, integration, and communication between key ministries and health sector agencies.
		Status: New Target Date: 01/11/2020 - Revised: JANUARY 31, 2022	In February 2021, the Ministry of Environment and Climate Change Strategy (ENV) indicated they had initiated discussions to re-establish a cross government ADM Committee on Water to facilitate collaboration on Provincial strategic water policies (i.e., the Strategic Plan for Safe Drinking Water and the Water Security Strategy). HLTH confirmed support for this initiative as an additional forum to improve cross government integration and coordination
		Action 2: HLTH will address controls in small water systems by working with BC Water and Waste Association (BCWWA) to expand the project "Building Sustainable Small Water Systems in BC" which has shown success with small water systems where:	for source water protection. Actions 3, 4 and 5) are dependant on the outputs of Action 2. Revised timelines have been noted.
		<ul> <li>all small water system owners in British Columbia have access to the knowledge, training, tools, and resources they require to make informed decisions about the long-term management and sustainability of their system; and,</li> </ul>	Action 2 Progress Assessment: Partially Implemented Actions Taken & Discussion:
		<ul> <li>stakeholders within the small water system business ecosystem work collaboratively to share resources, expertise, and experience.</li> <li>The actions are as follows:</li> </ul>	In September 2019, HLTH led a multi-year contract with BC Water and Waste Association (BCWWA) to expand the project <i>Building Sustainable Small Water Systems in BC</i> to develop capacity, knowledge base and tools to support small water system.
		<ol> <li>Establish stakeholder group and determine best approach to engage all constituents (March 2020).</li> <li>Build the understanding and the accountability knowledge that enables all water associations, training providers and other supporters of small water systems to share resources and expertise with small water systems owners and operators (June 2020).</li> </ol>	<ol> <li>Complete: In September 2020, an advisory committee to oversee the deliverables of this project was established with representation from health authorities, Indigenous Service Canada, Office of the Provincial Health Officer (OPHO) and HLTH.</li> <li>Complete: In Fall 2020, BCWWA conducted surveys and workshops with small water</li> </ol>
		<ol> <li>Build out training offerings so that they are accessible to all 4400 small water systems including workshops, new programs, and converting the training to an online format to expand accessibility (September 2020 - Revised: JUNE 2021).</li> </ol>	system owner, operators, and supporters to solicit input on the content needed for training materials and the appropriate training delivery approach. In December 2020, BCWWA provided HLTH with two reports, one that summarized the outcomes of the survey and

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		<ol> <li>4) Develop, a small water system network infrastructure that enables all small water systems owners and operators to support each other, access information, training, share expertise and experience, and, a collaborative small water system network of advisors, supporters, and mechanisms for small water systems to engage local resources and supporters (March 2021 - Revised: JUNE 2021).</li> <li>5) Continue the Point of Entry, Point of Use, pilot agreements in additional (one or two) locations to facilitate development of a legal model for water suppliers to provide services in individual homes (March 2021 - Revised: DECEMBER 2021).</li> <li>6) Monitor the project, uptake of the training and implementation (ongoing).</li> <li>Status: Project will be initiated in January 2020.</li> <li>Target Date: Jan 31, 2021 - Revised: DECEMBER 2021</li> </ol>	<ul> <li>workshops, and one that outlines the design criteria for the network infrastructure. The pandemic has delayed components of this work as the engagement plan was originally designed for in-person sessions and needed to be redesigned for the virtual environment .</li> <li>3, 4) In Progress: BCWWA will offer virtual courses and launch the network infrastructure by the end of June 2021.</li> <li>5) In Progress: BCWWA is currently designing the proposal for Point of Entry, Point of Use, pilot agreements. New timeline is noted.</li> <li>6) Ongoing: Monitoring of project progress is ongoing and methods to monitor uptake will be identified in Action 4.</li> </ul>
Yes	Recommendation 2: (HLTH) Provide the leadership necessary to develop a cross-ministry commitment to coordinate strategies to address risks to drinking water. This includes establishing clear roles, responsibilities and accountabilities for all government agencies that are responsible for ensuring safe drinking water.	<ul> <li>Lead the development of a senior level cross ministry table that supports the coordination of strategies, assists in establishing clear roles, responsibilities, and accountabilities, and prioritizes the protection of health in regulatory decision-making.</li> <li>Action 1: HLTH will actively work with partner ministries to coordinate existing and future strategies to address health risks to drinking water supplies while the work on establishing roles, responsibilities and accountabilities is occurring.</li> <li>The following are existing strategies where HLTH is playing a leadership role to ensure that health is considered in regulatory decisions that could impact source water:</li> <li>A. Ministry of Environment and Climate Change Strategy (ENV) Source Drinking Water Quality Guidelines and Water Objectives:</li> <li>HLTH is reviewing the ENV water quality guidelines and standards to ensure safe drinking water standards and aquatic food protection are integrated into Natural Resource Sector water quality guidelines supporting effluent permits and authorizations (Target date: March 2020 - Revised: DECEMBER 2021).</li> </ul>	RECOMMENDATION 2: PARTIALLY IMPLEMENTEDAction 1 Progress Assessment: Partially ImplementedActions Taken and Discussion:A. Complete: HLTH collaborated with ENV to update the Province's Source Drinking Water Quality Guidelines (completed June 2020) and the molybdenum water quality guidelines (completed November 2019) for source water protection. These recent projects are examples to illustrate how HLTH work closely with ENV on policies that protect drinking water sources.HLTH is currently finalizing its British Columbia Guidance for Prospective Human Health Risk Assessment (HHRA), which outlines HLTH's requirements to protect risks to human health. The final document will be posted online in April 2021 (OAG Recommendation 2 Action 1).Once completed, HLTH will collaborate with ENV to develop: 1) risk-based screening values for freshwater fish and shellfish tissue in BC; and 2) the methodology for calculating risk- based screening values. HLTH completed its review of ENV's screening values for mercury, lead, cadmium, arsenic, polychlorinated biphenyls (PCBs), chlorophenols, and polycyclic aromatic hydrocarbons (PAHs) in July 2019. These risk-based screening values for fish and

<ul> <li>B. Hullcar Aquifer Response Plan:</li> <li>HLTH is participating in the ENV-led Hullcar Interagency Working Group to improve regulatory responses and actions to address contamination from agricultural waste in drinking water sources. Working group members include Interior Health Authority, PHO, First Nations Health Authority, Ministries of Agriculture, Forest Lands and Natural Resource Operations and Rural</li> </ul>	shellfish tissue are used to pro-actively identify potential for bioaccumulation of contaminants in BC waters and biomagnification up the food chain that poses a risk to consumers. Screening values also support health authorities determine when a consumption advisory is required. Anticipated completion date for the screening values for fish and shellfish tissue is summer 2021.
<ul> <li>Development (FLNRORD), Municipal Affairs and Housing (MAH), and Indigenous Relations and Reconciliation, and Splatsin First Nation. The actions are as follows:         <ul> <li>Develop Draft Public Health and Safety Report and submit to the Working Group for review (November 2019).</li> <li>Sign on to the Inter-Ministry Memorandum of Understanding with Splatsin First Nation</li> </ul> </li> </ul>	B. Ongoing: HLTH is a member of the Clcahl/Hullcar Steering Committee which is now responsible for overseeing the implementation of the Hullcar Aquifer Response Plan (HARP). In January 2020, HLTH competed the <i>Public Health and Safety Report</i> (a recommendation of the HARP) and provided this to the Steering Committee. The Committee is currently updating the Memorandum of Understanding with the Splatsin First
<ul> <li>for developing a co-governance watershed management model and mechanisms to improve watershed ecological health and to protect human health from water-borne illness. (December 2020 with the timeline for action to be established by the Working Group).</li> <li>Consult with the Working Group on recommended actions under the Draft Public Health</li> </ul>	<ul> <li>Nation; this is intended to create a collaborative governance arrangement that will review and ultimately implement the <i>Public Health and Safety Report</i>.</li> <li>HLTH is also a member of the Technical Sub-committee which functions to review the ground water monitoring program for the Hullcar aquifer. HLTH's technical staff are presently working with other ministries to review the results of the monitoring program, to</li> </ul>
<ul> <li>and Safety report and integrate partner Ministries roles into the overall response (February 2020).</li> <li>Develop recommendations and agreements for improving regulatory response and oversight of agricultural waste management and finalize the Public Health and Safety report (June 2020).</li> </ul>	<ul> <li>identify gaps, analyze the water quality trends and provide advice to the monitoring program.</li> <li>C. In Progress: HLTH received the final Water System Risk Management Plan (WRSMP) from the City of Fort St. John in Nov 2019. Plans from City of Vancouver and City of North Vancouver are expected by March 31, 2021. These plans and the community's feedback will</li> </ul>
<ul> <li>C. One Water System Risk Management Plans (the Plans):</li> <li>Advance the development of a new professional model of oversight of drinking water systems</li> </ul>	provide HLTH with information regarding the value of WSRMPs to communities and also community readiness. This information will inform HLTH's next steps for the WSRMP project.
that integrates a 'system risk' management plan. The Plans will support development of a provincial approach for identifying priorities in the management of drinking water, and addresses recommendations in the 2009 Internal Audit of Drinking Water Resources. The Plans are intended to identify, evaluate, and address critical risks and systemic issues in individual water systems, relationships between water systems and relationships with Ministries. This work is being done with ENV, MAH, Emergency Management BC, and FLNRORD. The actions are as follows:	D. In Progress: This project is on track. Two subsequent drafts of the <i>British Columbia Guidance for Prospective Human Health Risk Assessment</i> have undergone review by technical experts and government agencies. HLTH completed consultations with external stakeholders on the guidance document in December 2020. HLTH has worked closely with the EAO and has received positive feedback. The guidance is planned for public release in April 2021.
<ul> <li>Finalize the draft sample Plans for the City of Fort St. John, Regional District of Nanaimo, City of Vancouver, and City of North Vancouver (March 2020 - Revised: JUNE 2021).</li> </ul>	E. In Progress: In 2017, to proactively address the emerging issue of lead in drinking water, HLTH provided interim guidelines for the surveillance and management of lead. The interim guidelines were posted online to be available for stakeholder use as well as to obtain stakeholder feedback. Following the release by <u>Health Canada</u> of national guidance for lead

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		<ul> <li>Revision of the draft Professional Practice Guidelines for the Preparation of Plans in BC based on the feedback received from the pilot communities (April 2020 - Revised: FALL 2021).</li> <li>Further engagement with the water sector through regional dialogue sessions to gather support and engagement in other communities (July 2020 - Revised: FALL 2021).</li> <li>Conduct additional pilot projects to further develop the approach (July 2021). (At this time, it does not appear that additional pilots are necessary to complete development of the approach)</li> </ul>	<ul> <li>in drinking water in March 2019, HLTH incorporated the new direction from Health Canada and immediately released British Columbia's <u>Guidelines on Evaluating and Mitigating Lead</u> <u>in Drinking Water Supplies, Schools, Daycares and Other Buildings</u> just one month later in April 2019.</li> <li>In addition, HLTH provided support to the Ministry of Education to develop and implement a comprehensive Province-wide protocol for testing for lead in drinking water in all schools.</li> </ul>
		<ul> <li>D. Human Health Risk Assessment Guidance: HLTH is leading the development of a Human Health Risk Assessment (HHRA) Guidance document focused on chemical risk assessment for the Environmental Assessment Office (EAO). The purpose is to support assessment of human health risks from proposed industrial projects including chemical risks through the drinking water pathway. The HHRA Guidance document will be used as a basis for decisions by government on whether industrial projects are approved to proceed through co-ordination by the EAO. The actions are as follows:</li> <li>Develop draft review of the HHRA Guidance document by technical steering committee (Complete).</li> <li>Facilitate revisions and required updates (June 2020). (Complete)</li> <li>Lead consultation with external stakeholders to inform the final HHRA Guidance document (December 2020). (Complete)</li> <li>Final HHRA Guidance document developed for submission to EAO for consideration (April 2021).</li> </ul>	
		E. Lead in Drinking Water Work with the Health Authorities, Ministries of Education, Children and Family Development, and MAH to ensure HLTH guidelines for assessing and mitigating lead in drinking water are implemented (ongoing).	

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		<ul> <li>Status: In Progress</li> <li>Target Date: Variable; project specific and noted above.</li> <li>Action 2: HLTH will work with partner ministries to establish proposed clear roles, responsibilities, and accountabilities for all government agencies that are responsible for ensuring safe drinking water. The actions are as follows: <ol> <li>Consult with the DMs from key ministries involved in the legislative review to inform this work (March 2020).</li> <li>Work with ministries and partners to identify existing roles, responsibilities and accountabilities for all government agencies and the PHO, responsible for protecting source water, creation of drinking water systems, and ensuring delivery of safe drinking water, including with natural resource sector ministries, MAH and others (March to May 2020 - Revised: JANUARY 2021 to SEPTEMBER 2021).</li> </ol> </li> <li>Review this work in relation to the actions taken through the legislative review to ensure there is synergy in the review and clarity to address issues/overlaps and gaps in roles and responsibilities (June/July 2020 - Revised: JANUARY to SEPTEMBER 2021).</li> <li>Confirm the recommendations for government's consideration on roles, responsibilities, and accountabilities to strengthen the protection of drinking water in the province</li> </ul>	(APPA update) Action 2 Progress Assessment: Partially Implemented Actions Taken and Discussion: 1) Complete: HLTH undertook consultation with the Deputy Ministers from key ministries to inform the work regarding roles and responsibilities in March 2020. 2) In Progress: HLTH has established a cross-government Executive Director Steering Committee on Drinking Water (EDSC-DW) to work towards coordination of strategies, establishment of clear roles, responsibilities, and accountabilities, and prioritizing the protection of health in regulatory decision-making. 3) In Progress: In February 2021, HLTH provided a comprehensive list of the related agencies' current roles and responsibilities in source water protection produced as a result
		<ul> <li>(November 2020 - Revised: JANUARY 2022).</li> <li>6) Based on government direction, develop a governance model with formal agreements between ministries and partners agencies that may include mandates and memorandum of understandings between ministries and agencies (December 2020 to March 2021 - Revised: MARCH 2022).</li> </ul>	Through the emergence of the COVID-19 pandemic, health authorities, the OPHO and ministry partners diverted significant resources to the pandemic response. This work is a priority for 2021, and updated timelines are reflected.
		<ul> <li>Advance required legislation amendments based on government direction (April 2022 to January 2022 - Revised: MARCH 2022).</li> </ul>	

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· ·	Recommendations Recommendation 3: (HLTH) Lead the development of a provincial strategic plan for the protection of drinking water that includes prioritized activities based on the risks identified in an integrated (interoperable) province-wide data system.	Status: New         Target Date: 31/01/2022         Health will lead the development of a provincial strategic plan based on information identified from the interoperable province-wide data system.         Action 1: HLTH will assess data requirements, analyze existing data sources across health authorities and partner ministries and agencies to inform the development of an approach to access and integrate data, building on work already underway. Integrated data will support risk identification and prioritization, policy decision-making, public reporting and inform developments in a provincial drinking water strategic plan. The actions are as follows:         A.       Identify and incorporate existing data sources from the health authorities by utilizing their accountabilities based on direction from HLTH related to developing standardized business processes and inspections for drinking water facilities. This work will also integrate the drinking water systems data to be collected and reported by the PHO, and, information	(APPA update) RECOMMENDATION 3: PARTIALLY IMPLEMENTED Action 1 Progress Assessment: Partially Implemented Actions Taken and Discussion: In February 2021, the Office of the Chief Information Officer's (OCIO) Digital Investment Board approved the concept case put forward by HLTH for a Drinking Water Information System Project as a priority project. HLTH is moving forward with the development of the formal business case, followed by contractor procurement and then development and implementation of this system. A. 1) Complete: The Drinking Water Leadership Council is the identified team representing of ministry, PHO, and Regional Health Authorities.
		<ul> <li>collected by the Environmental Operators Certification Program's (EOCP) Customer Relationship Management system.</li> <li>1) Create a team of ministry, PHO, and Regional Health Authorities (December 2019).</li> <li>2) Engage a consultant to develop a project charter and business plan (February 2020).</li> <li>3) Develop common business processes and logic models for a BC drinking water program in HLTH, BC Centre for Disease Control and Regional Health Authorities: <ul> <li>a. Define drinking water processes against every provision of the <i>Drinking Water</i> <i>Protection Act</i> and regulation.</li> <li>b. Outline the logic for all business process action, rationale for activities and the end goal of activities.</li> <li>c. Develop measurable metrics against all processes which inform the program performance and outcomes of the processes (December 2020 - <b>Revised: NOVEMBER</b> 2021).</li> </ul> </li> </ul>	<ol> <li>2) Complete: HLTH is working with a consulting firm (MNP) to identify current state, ideal future state and gaps to implement standardized business processes for drinking water. The aim is to establish consistency in implementation of the <i>Drinking Water Protection Act</i> and Regulations among the regional health authorities. Engagement will commence in March 2021 with health authorities and the OPHO on this project. Consultations have been delayed due to the limited ability to engage health sector partners due to competing priorities associated with COVID-19.</li> <li>3) In Progress: Consultant is facilitating interviews with health authorities presently. Revised timelines are noted.</li> <li>4) The outcomes of step 3) will help inform the identification of internal drinking water program performance indicators and measures.</li> <li>5) In Progress: HLTH has also made progress on actions for additional indicators, data systems and risk evaluations as outlined below:</li> </ol>

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	<ul> <li>4) Identify internal drinking water program performance indicators and measures (February 2021; Revised: NOVEMBER 2021).</li> <li>5) Additional indicators will be developed and identified in the following projects and added to the data system when available: <ul> <li>a. Complete water treatment guidelines and standards upon which some performance indicators and measures will be based (March 2021 – Revised: DECEMBER 2021).</li> <li>b. Finalize standard operating permit, incorporating data requirements that would serve as indicators (March 2021 - Revised: AUGUST 2021).</li> <li>c. Finalize agreement to integrate and share information across health authorities and EOCP (June 2021).</li> <li>d. Collect information from revised operating permits and rollup to identify water systems not meeting treatment objectives (September 2021 - Revised: MARCH 2022).</li> </ul> </li> <li>B. Consult with resource sector ministries, including ENV for evaluating risks and developing actions for source water protection to determine if existing data systems can support source water risk assessment, policy development and strategic planning. Planned steps include: <ul> <li>1) Establish an inter-ministry data evaluation team; following up from Recommendation 2, above (January 2021; Revised: MAY 2021).</li> <li>2) Develop inventory of potential source water data available across government and NGO stakeholders (May 2021; Revised SEPTEMBER 2021).</li> <li>3) Identify relevant data that meet HLTH's needs - see performance indicators and measures under Action 1(A) above (June 2021).</li> <li>4) Identify ownership of data, privacy concerns and data formats, including existing sharing agreements (August 2021; Revised DECEMBER 2021).</li> <li>5) Finalize agreements to integrate and share information across provincial organizations (October 2021).</li> </ul> </li> </ul>	<ul> <li>a.) In Progress: HLTH has developed <i>Guidelines on Ultraviolet Disinfection of Drinking</i> <i>Water</i> and <i>Guidelines for Pathogen Log Reduction Credit Assignment</i> as guidance for water systems to meet provincial water treatment standards. Both documents are currently undergoing targeted stakeholder review with completion in April 2021.</li> <li>HLTH contracted consultant (WSP) to develop <i>Design Guidelines for Drinking Water</i> <i>Systems in British Columbia</i>. HLTH and WSP has consulted with health authorities, the Ministries of Municipal Affairs, Environment and Climate Change Strategy, Forests, Lands, Natural Resource Operations and Rural Development on the draft guidelines has taken place. External stakeholder engagement with industry associations, local governments, and subject experts is currently underway with completion in April 2021.</li> <li>b.) In Progress: A draft standardized operating permit has been developed and is being brought to the health authorities' Regional Directors and the Environmental Health Policy Advisory Committee (EHPAC) for final approval. HLTH has initiated initial work on developing the electronic permit form and associated data system under its Drinking Water Information System Project. Engagement on the operating permit approval has been delayed due to the limited ability to engage health sector partners because of competing priorities associated with COVID-19.</li> <li>c &amp; d.) The outcomes of Action b will help inform the identification of internal drinking water program performance indicators and measures.</li> <li>B. In Progress: HLTH will work collaboratively with other agencies through the EDSC-DW to identify risks and develop actions for source water protection, establish data needs and identify data sharing needs including consideration of privacy concerns and data sharing agreements.</li> </ul>

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Yes / No <sup>2</sup>		<ol> <li>6) Confirm the water system performance measures, indicators and information needs to monitor the system (November 2021).</li> <li>7) Develop a proposal for development of an interoperable management system (December 2021).</li> <li>Status: New</li> <li>Target Date: 31/12/2021</li> <li>Action 2: HLTH will take the leadership role with partner ministries and other agencies, to develop a provincial strategic plan (the Plan), informed by the interoperable data project, that includes prioritized activities, deliverables, and timelines. The actions are as follows:         <ol> <li>Consult with DMs from key ministries to inform of the deliverables and timelines to develop the Plan (November 2020 - Revised: DECEMBER 2021).</li> <li>HLTH will lead executive level discussions with natural resource sector ministries and MAH to identify approach to formally integrate health protection requirements into regulatory decision-making impacting watersheds (December 2020 - Revised: JANUARY to NOVEMBER 2021).</li> <li>Undertake an analysis of the information from the data project, legislative review, and review of roles, responsibilities, gaps, and opportunities (June 2021 - Revised: JANUARY to NOVEMBER 2021).</li> <li>Identify prioritized activities, deliverables, timelines, resources, and the actions needed to accomplish the development of the Plan (September 2021 - Revised: DECEMBER 2021).</li> <li>Prioritize water systems needing infrastructure upgrades and integrate/apply to an improved grant program with MAH based on priorities identified (September 2021 - Revised: DECEMBER 2022).</li> <li>Finalize the draft Plan and socialize with DMs from key ministries before bringing to</li> </ol></li></ol>	<ul> <li>Action 2 Progress Assessment: Partially Implemented</li> <li>Actions Taken and Discussion:</li> <li>A proposed renewed Provincial Strategic Plan for Safe Drinking Water will form the recommendations for government consideration and will replace the 2002 Action Plan for Safe Drinking Water. The work supporting this APPA will form the foundation for a Provincial Strategic Plan, which is now anticipated to be delivered in March 2022.</li> <li>1) In Progress: The EDSC-DW is reviewing the gaps and opportunities identified in the independent legislative review including opportunities to integrate health protection into decision-making, and provide clarity to roles, responsibilities, and accountabilities with respect to source water protection. HLTH is bringing an outline of the Strategic Plan to EDSC-DW for discussion and approval. HLTH is also working with existing health sector governance structures (Drinking Water Leadership Council and the Environmental Health Policy Advisory Committee) to engage with stakeholders.</li> <li>Actions 2, 3, 4, 6 and 7 are sequential actions that follow Action 1. Revised timelines are noted.</li> <li>5) In Progress: Ministry of Municipal Affairs (MAH) provides grants to local governments for infrastructure upgrades. In 2019, HLTH engaged with MAH to provide assistance to MAH to</li> </ul>
		<ul> <li>government (November 2021 - Revised: DECEMBER 2021).</li> <li>7) Present the final Plan to government for support and formally confirm commitments required to advance the Plan by all involved ministries (December 2021 - Revised: JANUARY 2022).</li> <li>Status: New</li> </ul>	prioritize water systems needing financing for infrastructure upgrades based on data and risks. The data from the proposed standardized operating permit project (OAG

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		Target Date: 31/03/2021 -Revised: JANUARY 2022	Recommendation 3: Action 4-b) will support these needs. As this is dependant on the output from the Operating Permit project and the development of the Drinking Water Information System, revised timelines have been noted.
Yes	Recommendation 4: (HLTH)	Action 1: HLTH will work with partner agencies to undertake risk identification and associated co-ordination with Ministries and agencies.	<b>RECOMMENDATION 4: PARTIALLY IMPLEMENTED</b> Action 1 Progress Assessment: Partially Implemented Actions Taken and Discussion:
	Undertake the following actions: a) identify where and what type of risks exist in relation to source protection, drinking water treatment, distribution, and small water systems b) coordinate with ministries and agencies to develop actions to mitigate identified risks c) develop a process for	<ol> <li>The actions are as follows.</li> <li>HLTH will review the outcome of the legislative review, gaps in roles, responsibilities, accountabilities, and identify and assess any overlaps and risks in the existing framework (November 2020 - Revised: NOVEMBER 2021).</li> <li>Risks identified through the interoperable data project, will be compiled with ministry partners, health authorities, and the PHO, and actions will be identified to mitigate the identified risks (January 2021 - Revised: SEPTEMBER 2021).</li> <li>HLTH will, with ministry partners, develop a risk mitigation strategy which includes resources requirements, funding and infrastructure needed for implementation to address the identified risks (December 2021).</li> <li>Status: New</li> <li>Target Date: 31/12/2021</li> </ol>	<ul> <li>1) In Progress: HLTH reviewed the findings and recommendations in the legislative report by Econics. In February 2021, HLTH presented the legislative review to the EDSC-DW for review, and discussion on developing a risk mitigation strategy. HLTH is in the process of collating EDSC-DW feedback to address the findings and recommendations in the legislative review including gaps in legislation, issues of governance, and lack of clarity in roles and responsibilities. The results of the feedback will inform direction on a risk mitigation strategy for source water protection.</li> <li>2) In Progress: In February 2021, the Office of the Chief Information Officer's (OCIO) Digital Investment Board approved the concept case put forward by HLTH for a Drinking Water Information System Project. Next steps include mapping the information needs of all identified data users (e.g., drinking water officers, HLTH analysts). This step will serve to identify, monitor, and manage risks. This work will also be informed by the common business processes project (OAG Recommendation 3).</li> </ul>
	the evaluation and adjustment of Health's guidelines to ensure they are effective	<ul> <li>Action 2: HLTH will develop a process for reviewing, evaluating, monitoring, and adjusting the guidelines to ensure protection of drinking water.</li> <li>The actions are as follows:</li> <li>1) Develop an evaluation framework that helps identify outcomes and measurables upon which HLTH will evaluate various existing guidelines (June 2020 - Revised: MARCH 2021).</li> </ul>	<ul> <li>3) Actions 3) is sequential to actions 1 &amp; 2). Revised timelines are noted.</li> <li>Action 2 Progress Assessment: Partially Implemented</li> <li>Actions Taken and Discussion: HLTH strives to continually review, evaluate, monitor and adjust guidelines to ensure that they are consistent with current science and provincial needs for the protection of drinkin</li> </ul>

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		<ol> <li>Develop and incorporate in all new guidelines a standardized evaluation process and timelines to evaluate and ensure they remain effective and current (August 2020 - Revised: MARCH 2021).</li> <li>Identify existing guidelines for evaluation and stakeholders to be consulted (September 2020-Revised: MARCH 2021).</li> <li>Develop appropriate questions and mechanism including timelines for getting feedback (December 2020 - Revised: MARCH 2021).</li> <li>Communicate the evaluation framework with accountabilities to the agencies responsible for monitoring the guidelines implementation (March 2021 - Revised: APRIL 2021).</li> <li>Gather and assess results and take actions as required to address any issues with guidelines on their implementation (August 2021).</li> <li>Information on risks will be brought forward into development of provincial strategic plan and coordination of strategies (October 2021 - Revised: FALL 2021).</li> <li>Status: New</li> <li>Target Date: 31/10/2021</li> </ol>	<ul> <li>water (see lead in drinking water, OAG Recommendation 2, Action 1-E); this action will increase transparency and consistency.</li> <li>1) In Progress: In February 2021, HLTH developed drafted the <i>Drinking Water Guidance Development and Evaluation Process</i> to support a transparent and consistent approach to assess the effectiveness of HLTH's guidelines. This draft will now go to the Drinking Water Leadership Council for review and feedback prior to finalization.</li> <li>2) Complete: A draft standardized evaluation framework and timelines to evaluate all new and existing guidelines has been completed.</li> <li>3) Complete: An inventory of existing guidelines and the list of stakeholders to be consulted has been created.</li> <li>4) Complete: The draft evaluation framework includes questions, mechanisms and timelines for stakeholder feedback including those agencies responsible for guidelines.</li> <li>5,6, and 7 will be initiated in April with the intention to complete the work by the expected timeline</li> </ul>
Yes	Recommendation 5: (PHO) Take action to improve the oversight of drinking water, including the development of: a) policy and procedures for reporting significant impediments to the Minister of Health b) guidance for drinking water officers on how and	<ul> <li>a) The Office of the PHO will engage with HLTH to develop a policy and procedures for reporting situations that significantly impede the protection of public health in relation to drinking water related to provincial government actions or inaction to the Minister of Health.</li> <li>Status: New</li> <li>Target Date: 31/03/2021 - Revised: DECEMBER 31, 2021</li> <li>b) The Office of the PHO will engage with health authorities and HLTH to develop guidance for drinking water officers on how and when to report situations to the PHO that significantly impede the protection of public health in relation to drinking water related to provincial government actions to 5 a). The guidance once developed will be included within the "Drinking Water Officer's Guide."</li> </ul>	<ul> <li>RECOMMENDATION 5: PARTIALLY IMPLEMENTED</li> <li>Action 1 Progress Assessment: Partially Implemented</li> <li>Actions Taken and Discussion: <ul> <li>a) The Office of the PHO (OPHO) developed a draft policy/procedure for reporting situations that significantly impede the protection of public health in relation to drinking water; and, arise in relation to the action or inaction of one or more ministries, government corporations or other agents of government. The OPHO has shared this draft guidance to the Drinking Water Leadership Council and has received feedback from all five regional health authorities and the First Nations Health Authority. Due to capacity constraints caused by COVID and delays in recruitment for support staff, the</li> </ul> </li> </ul>

Rec. #OAGAccepted? Yes / No2Recommendations	Actions Planned & Target Date(s) <sup>3</sup>	Assessment of Progress to date <sup>4</sup> and Actions Taken <sup>5</sup> (APPA update)
<ul> <li>when to report situations to the Provincial Health Officer that significantly impact drinking water</li> <li>c) a process for evaluating and tracking significant impediments</li> <li>d) a process for monitoring drinking water officers' compliance with guidelines and directives</li> </ul>	d) The Office of the PHO in consultation with the health authorities and HLTH has developed a	<ul> <li>draft guidance has not yet been finalized and is currently being reviewed by HLTH. Once the revisions and consultation with HLTH is complete, the procedures will be ready to include in the Drinking Water Officer's Guide. As of late January/early February, two new full-time employees were added to the OPHO to support the Provincial Drinking Water Officer in this work.</li> <li>b) The OPHO developed draft guidance for drinking water officers on how and when to report significant impediments to the protection of drinking water to the PHO. The draft guidance was shared with Drinking Water Leadership Council and the OPHO received feedback from all five regional health authorities and the First Nations Health Authority. The draft guidance has not yet been finalized due to capacity issues as noted previously.</li> <li>c) The OPHO developed a tracking spreadsheet for recording complaints received related to drinking water. The OPHO will also track and report out on the number of reports made to the Minister under section 4.2(1) within future public reports on activities under the Act.</li> <li>d) The OPHO continues to roll-out the new indicators as described under the action plan with the regional health authorities within our annual data requests. The ability of the OPHO to report out on these progress indicators is tied to the regional health authorities undergoing significant adaptations to their data systems. Some work has been done to date, but limited action has been taken since 2019 with the arrival of COVID, which has put a significant strain on the staffing and resources of the health authorities. Furthermore, the regional health authorities' capacity to complete the annual data request from the OPHO is currently limited. Two health authorities have yet to submit their 2019/20 data, and it is anticipated that all five health authorities wit face challenges in submitting the 2020/21 data request in a timely way.</li> </ul>

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Yes	<b>Recommendation 6: (PHO)</b> In collaboration with the HLTH, review the legislative provisions regarding drinking water protection plans and report out to the Minister of Health on impediments to the protection plan's implementation.	<ul> <li>In collaboration, the PHO and HLTH will review legislative provisions for Drinking Water Protection Plans (DWPP) under the <i>Drinking Water Protection Act</i>.</li> <li>HLTH and the PHO will work in collaboration to review any impediments to recommending, developing, and implementing drinking water protection plans, and assess similar planning processes, under other legislation such as the <i>Water Sustainability Act</i> and other community-based planning measures,</li> <li>Based on the outcome, develop potential amendments to the legislation for consideration.</li> <li>Status: Partially implemented</li> <li>Target Date: 31/03/2021 - Revised: DECEMBER 2021</li> </ul>	RECOMMENDATION 6: PARTIALLY IMPLEMENTEDAction Progress Assessment: Partially ImplementedActions Taken and Discussion:The OPHO, in collaboration with HLTH has drafted a Drinking Water Protection Plan ReviewProject Scoping Statement to i.) review the legislative provisions regarding Drinking WaterProtection Plans, and ii.) identify any impediments to the implementation of such plans.Capacity constraints caused by the COVID-19 response, staff vacancies, and a significantchange over in leadership positions delayed the start of this project. Furthermore, it wasidentified early on that the actions HLTH was leading in response to recommendation 1 tocarry out a review of source water protection mandates and legislative tools would informthis review and help identify potential amendments for consideration. As such, the projectinitiation for the work on drinking water protection plans was delayed until the final reporton source protection mandates for recommendation 1 was received. In January 2021, HLTHreceived the final report and the leadership and staff vacancies at HLTH and the OPHO arenow filled and the project has commenced.

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Yes	Recommendation 7: (HLTH) Report out to the public on the progress it is making in improving the protection of drinking water for all British Columbians.	<ul> <li>HLTH will develop a reporting framework and report on the progress to improve drinking water for people in British Columbia.</li> <li>HLTH will develop a process for determining performance measures and indicators for reviewing, evaluating, monitoring, and reporting regularly on the protection of drinking water. The actions are as follows: <ol> <li>Clarify the role and reporting scope of the PHO and HLTH given the dual reporting roles (January 2020 - Revised: SPRING 2021).</li> <li>Develop the reporting mechanism, set timelines for reporting, and the key performance measures that will identify progress on drinking water improvements (June 2020 - Revised: SPRING 2021).</li> <li>Evaluate progress on drinking water improvements according to the reporting framework and release the first interim report (October 31, 2020 - Revised: SPRING 2021) publicly.</li> <li>Develop an annual reporting cycle (January 2021- Revised: SPRING 2021)</li> </ol> </li> <li>Status: New</li> <li>Target Date: 30/01/2021 - Revised: SPRING 2021</li> </ul>	RECOMMENDATION 7: PARTIALLY IMPLEMENTEDAction Progress Assessment: Partially ImplementedActions Taken and Discussion:1) In Progress: HLTH and OPHO began work in early 2021 to clarify their roles and reporting scope as outlined in the Public Health Act, the DWPA/R, and the 2002 Action Plan. Progress has also been made in two areas that support clarification of roles and reporting scope: a) collaboration on a draft project charter for developing common business processes (see OAG Recommendation 3, Action 1); and b) collaboration on policy and procedures for reporting situations that significantly impede the protection of public health (see OAG Recommendation 5). Capacity constraints caused by the COVID-19 response, staff vacancies, and a significant change over in leadership positions delayed the start of this project.Actions 2, 3 and 4 are sequential actions that follow Action 1. Revised timelines are noted.
Yes	<b>Recommendation 8: (PHO)</b> Monitor progress and trends in the protection of drinking water and report on a timely basis to the Minister of Health and the legislative assembly on whether activities are mitigating risks.	The Office of the PHO will continue to refine and improve how we monitor progress and trends in the protection of drinking water through our new reporting structure and indicators (as described in 5 d). Future PHO reports will continue to cover several fiscal years as progress in drinking water infrastructure improvements take time. That said, the PHO will continue to refine and track activities under section 4.1 of the <i>Drinking Water Protection Act</i> , on an annual basis and will report on these activities annually independent of the larger PHO report. <b>Status:</b> New <b>Target Date:</b> 31/03/2021 – <b>Revised: MARCH 2022</b>	RECOMMENDATION 8:         Action Progress Assessment: Partially Implemented         Actions Taken and Discussion:         The 2019 PHO Report, "Clean, Safe, Reliable Drinking Water" introduced the PHO's new indicators and framework for monitoring progress and trends in the protection of drinking water. Due to capacity constraints caused by COVID and delays in recruitment of staff to support the Provincial Drinking Water Officer, the development of a plan for an annual update on activities under the Act in addition to the larger report has only just got underway.