

Water for Life Implementation Review 2016-2019 (2021)						
Rec #	Recommendation	Implementer(s)	Implementation Target	Last Update	2024 Update	Comments
						General Comments: Government of Alberta: <i>Water for Life</i> remains to be the overarching strategy for water in Alberta to ensure safe, secure drinking water, healthy aquatic ecosystems, and reliable, quality water supplies for a sustainable economy. The Government of Alberta continues to develop, adopt, and promote a watershed, risk-based, source-to-tap drinking water management approach that focuses on integrated watershed and land use planning, effective monitoring and compliance of point and non-point source pollution, efficient and effective water distribution systems, and healthy aquatic ecosystems.
1	New <i>Water for Life</i> Action Plan That the AWC collaborate with its partners and stakeholders to identify, by 2024, current work, information, challenges, and opportunities, that could be used to inform any development of a new 10-year action plan to achieve <i>Water for Life</i> goals and key directions and how the Water for Life partnerships can support plan implementation.	Alberta Water Council	2024	Pending – to be completed	Pending – to be completed	In 2021, a statement of opportunity was submitted by the GoA for the AWC to consider work in this area. The AWC had approved launching a working group to scope terms of reference for a project team inform the GoA's efforts to develop the next iteration of the <i>Water for Life</i> Action Plan. A project team kicked off and sectors worked for several months to draft and vet potential actions for the plan. Because of the provincial elections and other changes, there was a delay in moving ahead with this important work. Sectors remain committed, and the project timeline was extended to the end of 2024. Sectors have had to find consensus on a new path forward and how to repurpose the work carried out till now. A final deliverable is anticipated to be brought to the AWC Board for approval in October 2024.
2	Improved <i>Water for Life</i> Reviews That the AWC improve future <i>Water for Life</i> assessments by using performance indicators where applicable and feasible, and which may be adjusted from time to time, implementing a schedule of reporting and periodically producing more comprehensive reviews of individual <i>Water for Life</i> elements.	Alberta Water Council	Ongoing long-term	Pending – to be completed	Pending – to be completed	The previous <i>Water for Life</i> Implementation Review wrapped up in 2021. There has not been an opportunity to make progress on this work yet. The next review will be initiated by the AWC in several years as is the status quo and will include the indicators developed by the 2021 review and look at possible improvements. AWC sectors are reviewing these recommendations as part of the <i>Water for life</i> Action Plan work.
3	Small Systems Standards That the GoA finish and publicly release standards for non-municipal public drinking water systems that fall under the <i>Public Health Act</i> as guidance for system operators by the end of 2022.	Government of Alberta	2022	Pending – to be completed	Pending – Uncertain	EPA is working jointly with Alberta Health and Alberta Health Services to support the completion and implementation of a new approach to regulating micro waterworks systems in Alberta. EPA: Phase I – Complete <ul style="list-style-type: none"> Renewed and amended the Potable Water Regulation to enable a newly published Standards for Micro Waterworks https://open.alberta.ca/publications/standards-for-micro-waterworks-systems Phase II – In Progress <ul style="list-style-type: none"> Work is ongoing on: <ul style="list-style-type: none"> development of a new Code of Practice for Micro Waterworks and associated legislative changes to implement (including finalization of jurisdiction between EPA and AH/AHS) new approach to operator certification for these types of systems. The Public Health Guidelines for Non-Municipal Drinking Water were released in July 2021, and are available at: https://open.alberta.ca/publications/public-health-guidelines-non-municipal-drinking-water Work to replace the Guidelines with Standards is ongoing.
4	Drinking Water Safety Plan Audits That the GoA improve the drinking water safety plan program for	Government of Alberta	2024	Pending - Uncertain	Pending – Uncertain	EPA is continuing to explore the scope of work in 2024 to inform a path forward. This work involves both compliance and drinking water operations specialization functions within EPA, and key considerations for system operators/owners. Currently, EPA Environmental Protection Officers

	publicly regulated systems by adding a mandatory review and/or auditing function to the current process by 2024.					routinely confirm that regulated water systems have developed, and maintain, a drinking water safety plan and Drinking Water Operations Specialists provide technical support for plan development. However, there is no formal audit process for plan content. The main challenge in moving this forward is securing the necessary EPA department staff or other resources (external contractors).
5	State of Drinking Water Report That the GoA, working with its drinking water partners, communicate by 2026 the state of drinking water and drinking water management systems (municipal, provincial, and federal) operating in Alberta, including roles and responsibilities, how risks are identified and mitigated, and where the public can get information about their local drinking water supply.	Government of Alberta	2026	Pending - Uncertain	Pending – to be completed	EPA work has been initiated on the documentation of the department’s Drinking Water Management System. This recommendation is being used to inform EPA discussions on content including gaps and opportunities. Collaboration and capacity across various EPA work units is an important consideration in implementing this recommendation as written. EPA is looking at linking this to the evolution of the Digital Regulatory Assurance System (DRAS). As part of DRAS release 5, a system will be built to manage and report on drinking water data that will replace the current EMS based system. In 2023-24, an assessment of gaps in the drinking water program was completed as part of the Regulatory Assurance Framework (RAF) initiative. This will help prioritize key initiatives.
6	One-water Approach That the AWC work with municipalities and other major water using sectors to provide the GoA advice (by 2024) on how management of source drinking water, wastewater, storm water, and water reuse can be improved by 1) identifying the policy or regulatory barriers and economic constraints to a “one-water” systems approach and 2) exploring the pros and cons of using green infrastructure to manage water quantity and quality in Alberta.	Alberta Water Council	2024	Pending – to be completed	Pending – to be completed	This project idea will be considered by the board at a future project selection meeting.
7	Healthy Aquatic Ecosystems Review That the AWC strike a project team to examine and report on the state of Alberta’s aquatic ecosystem health and its management (by 2022) and identify barriers and opportunities to improve capacity, governance, and accountability (by 2024) for achieving the <i>Water for Life</i> goal of healthy aquatic ecosystems.	Alberta Water Council	2024	Pending – to be completed	Pending – to be completed	This project idea will be considered by the board at a future project selection meeting.
8	Water Use Data That the GoA improve our knowledge of water use by finding a mechanism to make licensed actual water use data publicly available by 2022.	Government of Alberta	2022	Pending – Uncertain	Pending – Uncertain	EPA is transforming its regulatory system. As part of this transformation, a Digital Regulatory Assurance System (DRAS) has transitioned its management of water licenses, including water use reporting, into a single system. Water use data collected through DRAS will be sent to a Data Management Platform (DMP) where it will be combined with the Alberta Energy Regulator (AER) and historical water use data for extraction, analysis and public reporting. Both DRAS and DMP are currently under development and EPA is working closely with the AER to ensure data integration. The first stage of this transition, where EPA’s data is moved to DMP, is expected in the fall of 2024. An Environmental Records Viewer (ERV) will also be available in the fall to access water licence application and authorization information.

						<p>This effort also includes transitioning existing water licenses and water use reporting from legacy systems (Water Use Reporting System – WURS) to DRAS and DMP. Functionality in DRAS has been built to enable water licence holders to move their licences from legacy systems into DRAS. Information about the new functionality has been shared with licence holders.</p> <p>The DMP roadmap is evolving and one of the foundational service offerings is data sharing between regulators and among GoA departments. This service offering will potentially be expanding to include other partners, stakeholders, and citizens.</p>
9	<p>Sustainable Economy</p> <p>That the AWC explore and provide advice to the GoA (by 2024) on what “sustainable economy” is in terms of Reliable Quality Water Supplies for a Sustainable Economy and 2) what the policy implications of various options, such as increased storage, improved efficiency, reduced administrative barriers, or sector water supply assistance programs, are to ensure this goal is achieved in the future, recognizing that solutions might look different in different regions and/or to different sectors.</p>	Alberta Water Council	2024	Pending – to be completed	Pending – to be completed	<p>This project idea will be considered by the board at a future project selection meeting.</p>
10	<p>Improved modelling</p> <p>That the GoA and its partners work to improve water supply and demand modelling, including scenario-building and forecasting (particularly in light of population growth, economic development, cumulative effects, and climate variability), periodically updating the AWC and its partners on their learnings and how such information can inform policy and other decision makers (ongoing).</p>	Government of Alberta	Ongoing long-term	Pending - Uncertain	Pending – to be completed	<p>The River Forecast Centre (RFC) continued to invest in the Alberta River Forecast System-Flood Early Warning System (ARFS-FEWS) by adding new functionality including snow water equivalent information and enhanced satellite imagery capabilities. These new functionalities support river ice monitoring, water supply modelling and flow forecasting. ARFS-FEWS is a centralized system that allows river forecasters to view measured precipitation, river conditions, weather forecasts, and satellite imagery all at once in a single platform. It is estimated the new system will enable river forecasters to produce flow forecasts 30 per cent faster than before.</p> <p>RFC is currently developing a model using the Raven Hydrological Modelling Framework for the entire South Saskatchewan River Basin, from the headwaters to Lemsford, Saskatchewan. Following the successful implementation of this model, RFC plans to expand the Raven model domain to include the rest of the forecast basins in the province. This expansion will enhance the government's public safety services by improving the ability to predict and respond to floods and droughts. This will also support better management of water licences, water management infrastructure, irrigation diversions, and our transboundary agreements.</p> <p>Additionally, the department is working on the following projects to support and improve modelling in the province:</p> <p>EPA recently completed a comprehensive climate change study for Alberta. This study produced long-term (1950-2019) historical hybrid gridded climate data for the province. In addition, a multivariate downscaling method has been developed and applied to produce up-to-date climate model intercomparison project (CMIP6) high-resolution climate projections (2015-2100) for a subset of 12 representative climate projections selected by a high-dimensional algorithm.</p> <p>EPA is a partner in a project investigating new methods to update reservoir-operating rules considering climate change impacts and future water demands. While the project focuses on the Oldman River and its southern tributaries, the methods developed can be applied province wide. The project expands the modelling capabilities and methods utilized by EPA to achieve more resilient water management infrastructure operations considering population growth, economic development, and climate change impacts.</p>
11	<p>Preparedness</p> <p>That the GoA and its agencies (e.g., Alberta Emergency Management</p>	Government of Alberta	Ongoing long-term	Implemented- as written		<p>AEMA engages with municipalities and other stakeholders to support and enhance all aspects of emergency management across the province. AEMA offers municipalities, First Nations and Métis Settlements with emergency management training, planning and exercise supports, and direct</p>

	Agency) and the AWC continue to work with WPACs and municipalities to promote municipal flood and drought management and to develop planning, best practices, and other informative and user-friendly tools that improve community preparedness1 (ongoing).				<p>engagement and advice during and after an event to assist communities to be better prepared for, respond to, and recover from disasters. In addition, AEMA offers communities access to a free online planning tool and is engaged in the development of a provincial hazard identification and risk assessment tool intended to assist users in developing effective and sustainable mitigation strategies tailored for their communities. EPA) continues to monitor potential flood and drought conditions and has undertaken activities to ensure the department is prepared to respond to water-related environmental emergencies. Improvements to the www.rivers.alberta.ca web app and AB Rivers mobile app were released in March 2022. The improvements were tested during a busy flood season and received overwhelmingly positive feedback from stakeholders. The improvements include the ability to issue flood advisories for smaller and more discrete river basins, as well as colour-coded lines for larger rivers. These changes will provide more precision when the River Forecast Centre is showing the areas under flood advisories.</p> <p>Provincial Flood Damage Risk Assessments are being produced for more flood-prone communities. The reports were created in 2022, with engagement scheduled in 2023. When complete, the relevant communities will be aware of their estimated financial exposure to floods of various sizes which will assist in prioritizing flood mitigation activity.</p> <p>Alberta continues to focus on working with municipalities, Indigenous communities, and the public on development of flood inundation and hazard maps for communities at risk.</p> <ul style="list-style-type: none"> • Alberta has a long-term flood mapping plan and is on track to expanding coverage and creating over 3,000 kilometres of new and updated mapping across the province by 2028. <ul style="list-style-type: none"> ○ Alberta’s flood mapping plan is reviewed annually and updated as needed to reflect new information, recent events, and the emerging needs of Albertans, with candidate communities for new flood studies identified and prioritized using risk-based factors. • Public engagement for 1,600 km of new flood mapping from 27 flood studies was completed earlier this year. <ul style="list-style-type: none"> ○ EPA will be finalizing 22 of these studies in fall 2024 and is planning to finalize the remaining 5 studies in early 2025 after revisions to address feedback are completed. • In addition to the 27 new flood studies already released, 4 draft studies are under local authority review (with future public engagement planned) and 13 studies are currently underway, with technical work expected to be complete next year. • EPA plans to start over 20 more flood studies over the next few years to cover more communities than ever, including rural and urban areas, and Indigenous communities. • Final and draft flood maps are available online through the Flood Awareness Map Application (www.floods.alberta.ca). <ul style="list-style-type: none"> ○ Recent improvements to the viewer include incorporating new flood zones and helping illustrate areas at potential risk of flooding in coordination with advisories and forecasts issued by the River Forecast Centre. • Alberta continues to maximize co-funding opportunities for new provincial flood studies, by leveraging support from the federal Flood Hazard Identification and Mapping Program. <p>Engagement and education work is underway that generally supports this recommendation. For example, a new drought website was developed on Alberta.ca: https://www.alberta.ca/drought.aspx. Additionally, several community-based engagements were conducted over the last year related to EPA flood mapping studies (including the Peace River, Upper Bow River, Bow and Elbow River, Sheep River, Highwood River, Fort McMurray, Siksika Bow River, Upper Red Deer River, Red Deer, Priddis, Medicine Hat, North Saskatchewan River, Drumheller, St Albert, Fort Macleod, Cardston, Fort Vermilion, Athabasca, Slave Lake, Pincher Creek, and Camrose studies).</p>
12	Education and Outreach That the GoA continue to work with <i>Water for Life</i> partners and other	Government of Alberta	Ongoing long-term		EPA continues to support WPAC Education and Outreach staff on numerous watershed literacy projects including a watershed video series. The video series will be promoted across the province to educate Albertan's on their watershed, watershed partners and stakeholders, key watershed

	educators to improve the water literacy of Albertans by maintaining the Water for Life and Water Channel websites and ensuring they are active, accessible, and user-friendly and provide access to Water for Life documents, partners, potential funding sources, water-related programs, citizen science initiatives, etc. (ongoing with periodic updates to the AWC).					management issues, and watershed stewardship. AEP also continues to maintain the Water for Life and Water Channel websites. Bow Habitat Station continues to play an important role in increasing the water literacy of Albertans. The program supports the three main goals of the Water for Life strategy with an emphasis on healthy aquatic ecosystems. Currently, Bow Habitat Station enhances water literacy through its interactive displays, hands on learning opportunities, and social media content. To increase the reach of water literacy messages across the province, Bow Habitat Station intends to develop a virtual program aligned with key messages identified in the <i>Water for Life</i> strategy.
13	Knowledge Integration That the GoA's water education, research, and monitoring and evaluation managers examine how they can better leverage and support each other's work and improve user-friendly communications, reporting to the Water for Life partners by 2022 on how their combined efforts and processes support an iterative and adaptive performance-based water and watershed management system.	Government of Alberta	2022	Pending to be completed	Pending- to be completed	Ongoing participation in steering, operational and science technical committees by representatives from multiple AEP Divisions/branches is facilitating better awareness of the breadth of water work being undertaken in AEP. These formal connections are resulting in multi-group inputs into, for example, the adaptive development and refinement of surface water quality management frameworks as well as wider departmental uptake and application of new and/or improved evaluation techniques related to water quality/quantity data.
14	Partnerships Review That the AWC strike a project team to examine how the <i>Water for Life</i> partnership framework can be improved to contribute more effectively to water and watershed management in Alberta (with team work completed by 2022).	Alberta Water Council	2022	Pending to be completed	Pending to be completed	This project idea will be considered by the board at a future project selection meeting.
15	Advancing CEP That the AWC continue to provide the forum for advancing voluntary water conservation, efficiency, and productivity (CEP) through the work of the Water CEP Project Team, as needed (ongoing)	Alberta Water Council	Ongoing long-term	Pending – to be completed	Implemented – as written	Sectors initially presented update reports on their water CEP trends and progress to the AWC in 2015. Building on the work of the three completed project teams described below, a fourth team was struck up in October 2015 to evaluate and report on the success of implemented CEP activities. The team evaluated contributions to the three goals of the <i>Water for Life</i> strategy, including the specific aspirational target of improving water use efficiency and productivity by 30% from 2005 levels by 2015. The AWC proposed performance indicators to track the progress of the seven major water-using sectors as they report on future CEP trends. Sectors agreed to collect and collate their data and report to the AWC every five years. The proposed performance indicators for reporting are: <ul style="list-style-type: none">• water diversion• return flow• net water use• efficiency (sector-specific)• productivity (sector-specific) Sectors are always encouraged to share any successes and lessons learned throughout the data collection and reporting process through the AWC forum. Sectors convened in 2023 to report on their progress using the mutually agreed upon performance indicators in the 2017 report, through the AWC's forum. A report detailing the findings and summarizing sector updates will be released in 2024. Sectors will be convened every 5 years by the AWC to continue reporting on these indicators.

