

Protecting Sources of Drinking Water in Alberta Project Team Terms of Reference

Approved by the Alberta Water Council (AWC) on March 29, 2018

CONTEXT

Albertans' quality of life depends on a healthy, secure, and sustainable water supply for communities, the environment, and the economy. Population growth, development, and climate variability continue to stress water supplies and the health and well-being of Albertans, the economy, and aquatic ecosystems.¹ The AWC launched a working group in October 2017 to scope a project on protecting sources of drinking water, based on a Statement of Opportunity brought forward by the Government of Alberta (GoA).

Source water is untreated, raw water from surface or groundwater sources used for drinking water or other uses. Source Water Protection (SWP) is a risk management process designed to maintain or improve the conditions of water through proactive, collaborative identification, validation, assessment, and management of risk.

In Alberta, SWP is occurring across various geographical areas, utilizing several practices, and spearheaded by diverse groups such as governments, Indigenous communities, watershed organizations, and others. For example, municipalities in Alberta are required to develop drinking water safety plans to assess risks to the source, treatment, network, and consumer components of waterworks systems.^{2,3} Several approaches are implemented to identify, manage, or minimize the potential introduction of contaminants in drinking water sources. There is a need for a common approach and integration of planning and risk management processes to guide SWP for drinking water purposes, particularly in rural and small communities lacking the capacity to do so.

A key goal of *Water for Life* is to ensure safe, secure drinking water supplies for Albertans. This project would advance outcomes of *Water for Life, Our Water, Our Future; A Plan for Action*, applicable regional plans, and other pertinent initiatives. While SWP is an extensive topic with multiple areas to examine, this project will focus on protecting drinking water sources with the premise that future phases of work may result following this work.

¹Government of Alberta, 2003. *Water for Life, Alberta's Strategy for Sustainability*. Available online: <http://aep.alberta.ca/water/programs-and-services/water-for-life/strategy/documents/WaterForLife-Strategy-Nov2003.pdf>. Accessed December 2017.

² Government of Alberta, 2015. *Drinking Water Safety Plan Data Assessment*. Available online: <http://aep.alberta.ca/water/programs-and-services/drinking-water/knowledge/documents/DrinkingWaterSafetyPlanAssessment-Mar2015.pdf>. Accessed February 2018.

³ Aside from municipalities, other groups and individuals may be required to develop drinking water safety plans.

STRATEGIC INTENT (GOAL)

The purpose of this work is to document existing SWP approaches and provide guidance for protecting public, private, and individual drinking water sources in Alberta. It will focus on the quality of surface and groundwater supplies (while recognizing that quality and quantity are related).

OBJECTIVES

1. Synthesize SWP practices, processes, and risks to drinking water sources in Alberta
2. Document complementary source water-related initiatives (i.e., legislation, plans, policies, programs in Alberta and opportunities for integration and collaboration
3. Examine SWP approaches and risk management models in selected jurisdictions
4. Identify successes, gaps, barriers, redundancies, and lessons learned
5. Develop a guidance document highlighting best practices uncovered from objectives 1 to 4

KEY TASKS

1. Develop a work plan that includes key tasks, expected deliverables, and timelines
2. Synthesize SWP practices, processes, and risks to drinking water sources in Alberta:
 - Inventory drinking water treatment plants and their water sources in Alberta
 - Conduct a survey/interviews among water treatment plant operators, GoA and Provincial Authorities, municipalities, Indigenous communities, WPACs, Alberta Health Services, and other upstream and downstream users on identified risks and risk management approaches to drinking water sources and SWP practices
3. Document complementary water initiatives (i.e., legislation, plans, policies, programs, education) in Alberta:
 - Create a list of existing source water-related policies, regulations, initiatives, and opportunities for integration and collaboration related to SWP through a literature search
4. Examine SWP approaches and risk management models in selected jurisdictions (e.g., North America, Australia)
 - Engage a consultant to scan and compile SWP practices in jurisdictions that face similar risks to Alberta's drinking water supply identified in task 2
5. Identify successes, gaps, barriers, redundancies, and lessons learned through project team analysis and discussion based on the results from tasks 2 to 4.
6. Develop a guidance document that highlights best practices from tasks 2 to 5 (this document would offer a vision for SWP in Alberta, inform a common approach, and identify tools for implementation to enable decision-makers manage source waters).
7. Provide regular updates and a guidance document to the AWC.

TIMELINES and DELIVERABLES

The project team will provide the following deliverables to the AWC:

- Present initial findings on SWP practices, processes and risks in Alberta.....Nov. 2018
- Share findings from the jurisdictional review.....March 2019
- Share draft guidance document with findings to the AWC.....June 2019
- Final guidance document with findings to the AWC.....Oct. 2019

MEMBERSHIP

Open to AWC Members and other relevant groups identified by the project team. The project team will operate in a manner that is consistent with the rules, policies and procedures adopted by the AWC, including the use of consensus to make decisions in a multi-stakeholder process.

BUDGET

The working group estimates a budget of \$120,000 as follows:

Core Funding Costs (covered by the AWC)

Type	Amount
Stakeholder Support	\$50,000
Hosting	\$5,000
Communications	\$15,000

Project Funding Cost (provided by stakeholders)

Type	Amount
Jurisdictional review by consultant *AWC has \$25,000 remaining from a previous project that may be available to contribute to this work, meaning only \$25,000 would need to be raised from stakeholders.	\$50,000