



# Alberta Water Council Source Water Protection Project Team

## Why source water protection (SWP)?

- **Increased pressure on drinking water sources** from a growing population, climate change, aging infrastructure, and increasing development
- **The health and well-being of Albertans** is promoted by providing access to safe and secure drinking water sources, as stated in the Government of Alberta's *Water for Life* strategy

## What is SWP?

- **Understanding and mitigating potential risk** to drinking water sources through protecting water quality and quantity
- **Coordination among stakeholders** to develop short- and long-term plans to prevent, minimize, or control potential sources of pollution or enhance water quality where necessary

SWP planning steps	SWP planning benefits
<pre> graph TD     S1[Step 1: Involve Key Groups and Create a Vision] --&gt; S2[Step 2: Characterize Your Source Water Area]     S2 --&gt; S3[Step 3: Set Goals]     S3 --&gt; S4[Step 4: Develop an Action Plan]     S4 --&gt; S5[Step 5: Implement the Action Plan]     S5 --&gt; S6[Step 6: Evaluate and Revise Periodically]     S6 --&gt; S1           </pre>	<ul style="list-style-type: none"> <li>• <b>Improve public health</b> which results in economic benefits from reduced illnesses, mortalities, health care costs, and productivity losses</li> <li>• <b>Reduce uncertainties</b> presented by the growing number of unregulated or unknown emerging contaminants that might not be removed by water treatment systems</li> <li>• <b>Reduce costs</b> (e.g., water treatment costs; expenses from contamination remediation; monitoring; engineering and legal expenses; and indirect costs of real estate devaluation)</li> <li>• <b>Improve compliance</b> with drinking water regulations</li> <li>• <b>Meet public expectations</b> and maintaining customer confidence</li> <li>• <b>Improve watershed and aquifer health</b> for current and future generations</li> <li>• <b>Improve communication and collaboration</b> among stakeholders and neighbours</li> <li>• <b>Maintain the cultural importance of water</b> to Albertans, including Indigenous Peoples.</li> </ul>

## Barriers to undertaking SWP planning in Alberta

- **Manual data acquisition, processing, and analysis** can involve significant cost and time, especially relevant for small urban or rural municipalities who do not have dedicated staff or resources to address water-related issues



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## The AWC SWP project aims to reduce time and cost barriers for SWP planning

- **Providing a central, accessible location for data and analytical tools related to SWP** in an existing web-based platform, and making general improvements to enhance the user experience
- **Providing educational resources to support use of the tool** through videos or written instructions
- **Providing information to drive development of SWP plans** such as leadership briefing documents



Information Platform for Decision Support and Evaluation of Cumulative Environmental Effects

- **THREATS is a secure, web-based data visualization and analysis platform** used to access and view complex spatial and time series data and predictive and model scenarios. It can be customized to include data and toolsets that address specific requirements.

Functionality planned or available in THREATS	Benefits of THREATS
<ul style="list-style-type: none"> <li>• User-defined delineation of catchment boundaries</li> <li>• Spatial map layers (e.g., parks, municipal boundaries, land cover)</li> <li>• Water quality and quantity data and analysis tools</li> <li>• Historical data and analysis tools for projections and future trends</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Reduces time and cost</b> by making data and analysis readily available, compared to manual data acquisition and processing</li> <li>• <b>Improves decision-making</b> through greater access to available information and data</li> <li>• <b>Provides a common suite of tools</b> to support SWP planning among users across the province</li> </ul>

### For more information

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- **AWC SWP Project page:** [www.awchome.ca](http://www.awchome.ca)

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