

Use of Rainwater

Water Availability Engagement



Population growth, economic growth and water variability are challenging the water management system in Alberta. New policy and regulatory tools could be used to increase water availability for Albertans and optimize the water management system to better address these issues while continuing to protect the aquatic environment.

This document provides background information on just one type of water management opportunity identified through conversations with stakeholders. It is intended to spark ideas and generate conversation.

The Government of Alberta invites your feedback on any opportunity to increase water availability in the province.

Current situation

Ownership of water is vested in the Crown as a natural resource managed for the benefit and use of all Albertans. The *Water Act* does not currently define rainwater or precipitation and therefore does not specify whether rainwater is included as water under the *Act*. Without clarity, it can be misinterpreted that any volume of rainwater could be collected (harvested), stored and used without a licence or any oversight.

If large volumes of rainwater are stored and used without a licence, local waterbodies and recognized water users

(licensed, household or traditional agricultural) may be impacted from captured precipitation that reduces runoff. Without oversight, it is challenging to assess or mitigate these potential impacts.

This is a larger risk in basins that are water-short or closed to additional licences being issued like the Bow, Oldman and South Saskatchewan River Basins. These same basins are more likely to have users who want to augment existing supply with large rainwater collection schemes (i.e., large roof systems).

Rainwater versus stormwater

Stormwater is surface runoff that has been collected on the ground through a storm drainage system and is regulated under the *Water Act*. Rainwater is collected from a roof surface or intercepted by an engineered rainwater collection system.

Compared to stormwater, rainwater is usually higher quality because it has not flowed over ground surfaces (e.g., parking lots or streets) and has not been in contact with potential sources of contamination like fertilizer, herbicide/pesticide, pet waste, oil, grease, anti-freeze. From a public health perspective, rainwater generally requires less treatment than stormwater.

The opportunity

Environment and Protected Areas is seeking clarity on rainwater collection, storage and use:

1. clarifying that rainwater is included as water to be managed by the Crown, and
2. determining what could constitute as low-risk rainwater collection, storage and use that would remain exempt from any potential licensing requirements (including residential rain barrels).

The Government of Alberta is not considering the regulation of individual residential rain barrels. Any potential amendments would explicitly exempt residential rainwater barrels from regulation, similar to how dugouts and on-farm water management are currently exempt from regulation.

Rainwater and its management

Environment and Protected Areas (EPA) considers large proposals for rainwater use on a case- by-case basis. There is no clear *Water Act* process for Albertans who wish to use rainwater. This creates uncertainty for potential rainwater projects that could have environmental and economic benefits for Albertans.

Some municipalities in Alberta have rainwater guidelines or policies in place. While these may provide helpful information to residents and builders and need to be followed if mandatory, they do not address the lack of provincial regulatory certainty under the *Water Act* with respect to rainwater use.

There are voluntary guidelines in place for residential rainwater use in the [Alberta Guidelines for Residential Rainwater Harvesting Systems 2010](#).

Benefits of rainwater use

Environmental benefits of using rainwater include increasing resilience of the water supply and drought mitigation. The high quality of rainwater makes it suitable and appropriate for many uses. Common uses include lawn and garden watering, greenhouse irrigation, and indoor toilet and urinal flushing. Municipalities may see incremental benefits in the amount of water they have to take and treat for household use, resulting in cost savings and deferring expensive upgrades.

EPA recognizes volumes of rainwater can be used without negatively impacting the environment or other water users.

Through stakeholder engagement, the government could determine a volume for larger commercial or industrial collection systems that could be safely used without a licence, while maintaining groundwater recharge and overland flow to rivers, streams, and lakes.

Focusing on licensing large volumes of rainwater use would ensure the environment, water users and jurisdictions downstream of Alberta are not adversely impacted by an increasing reliance on rainwater use, especially in regions where water is already closely managed.

We want to hear from you

Consider these questions on defining rainwater before providing your feedback:

- How could rainwater be defined for better management under the *Water Act*?
- Aside from a small residential exemption for rainwater, should government consider other potential exemptions (for example, non-consumptive use, or a simple volume threshold for any purpose)?
- Would there be a need to account for regional differences?

Get engaged

Learn more about the Water Availability engagement and have your say at alberta.ca/water-availability-engagement