



DROUGHT ADVISORY: RISKS AND MANAGEMENT FOR 2024

The Government of Alberta has identified drought and potential water shortages as a critical issue. With proactive water management and working together, we can make the best use of the province's water supply and increase our chances of being able to meet the needs of all water users.

WHY THIS MATTERS TO OUR MEMBERS

Water is a critical production material for concrete producers, cement producers, aggregate operations and more. As a member, we want you to be aware of this growing issue. No water equals no concrete, so safeguarding your water supply will help ensure concrete production.

IT'S TIME TO COMMUNICATE

We advise to take initiative and engage with your municipalities or water licence holder to determine the likelihood, and what impact potential water shortages may have on your operations. Create an open line of communication and work together to develop contingency plans should there be a risk of water shortage that will impact your business operations.

THE CURRENT SITUATION

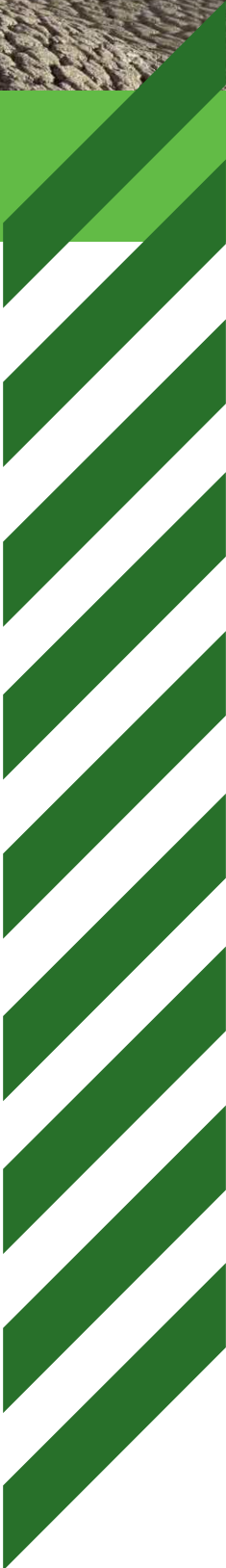
“ As of February 9, 2024, there are currently 51 water shortage advisories in place for select water management areas across Alberta. - GOA, Drought! Alberta.ca ”

Over the summer of 2023, critical water shortage due to low rainfall and high temperatures affected five basins: Milk River and Oldman River, South Saskatchewan River, Bow River, Red Deer and North Saskatchewan River and Tributaries to the Peace, Athabasca, and Hay River. From July to September 2023, natural river flows were monitored at 17 locations and at it highest dropped by 59% compared to historic natural flow.

Example of Bow River in SE Alberta:



November and December 2023 proved to be mostly warm and dry. Since November 1, precipitation was well below average. While many areas across the four agricultural zones remained virtually snow free.





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WHAT YOU CAN DO NOW



Here is a list of preventive measures for Members to consider to conserve water:

- Capture and reuse wash water, stockpile drainage and stormwater from site activities (such as truck washing).
 - Utilize settling ponds in aggregate washing activities for reuse.
 - Deepen settling ponds to reduce evaporation.
 - Use shade balls on surface water sources or other shade sources.
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- Wash aggregates at night to reduce evaporation.
 - Improve nozzles on washing hoses for higher pressure washing.
 - Refrain from using non targeted washing methods such as spray bars.
 - Pave roads around concrete production plants to reduce the need to use water trucks for dust control.
 - Utilize nozzle aerators and water reducers on water taps to reduce volume use.
 - Consider using saturated limewater tanks for curing concrete test cylinders as opposed to fog rooms.
 - Optimize cementing materials contents in mixes to reduce the amount of water required to achieve strengths and exposure class requirements.
 - For those production plants with the infrastructure to utilize captured water in concrete mixes, consult CAC's 9th edition of Design & Control of Concrete Mixtures.
 - Prioritize fixing leaks at a policy level.
 - Conserve the raw materials that are water-intensive, especially cement and aggregates.
 - Utilize effective dust suppressants other than water.
 - Limit water use through timers or pre-set volume dispensing systems.
 - Select new admixtures to conserve and to enhance the performance of mix ingredients.
 - Use retarders (where applicable) to limit slump loss and water addition on sites.



- Underfill truck side tanks or limit daily volume used in side tanks.
- Make use of specialized admixtures to minimize use limitations of returned concrete.
- Shade aggregate piles.

WE'RE HERE TO HELP

The Association is here to support our members in these conversations. Different areas of the province will have different plans to address the drought and potential water shortage. If you would like assistance, contact the office and we can work with you and your municipality or water licence holder to help come up with a plan.

RESOURCES

Government of Alberta:
Drought – Information for Water Licence Holders and Municipalities
<https://www.alberta.ca/drought-information-for-water-licence-holders-and-municipalities>

2024 Drought Risk and Management
<https://www.alberta.ca/system/files/epa-drought-risk-and-management.pdf>

Drought – Current Conditions
<https://www.alberta.ca/drought>