

DROUGHT RESILIENCE

QUENCHING THE THIRST!

WHAT IS DROUGHT?

Drought is defined in the Oxford dictionary as “a prolonged period of abnormally low rainfall, leading to a shortage of water.” Drought can have severe consequences, everything from social to economic aspects of our lives being impacted and Camrose is far from immune.

Drought increases food and energy prices, decreases local productivity for markets, and also decreases worker efficiency. Even the environment is impacted through loss of wetlands, decreased water level for our lakes, major risks of wildfires, wildfire smoke which has a negative effect on our air quality, destruction of habitat and loss of life for animals and plants.

Water usage can further be divided into two categories: essential and non-essential. Severe drought conditions may lead to policies that limit water consumption to essential use only. Therefore, non-essential water use could be limited depending on the stage of drought the City of Camrose has called action for.

These limitations could mean only watering lawns on certain days, limited vehicle washing, or having bulk water supplies suspended. Certain recreational activities, working, and grocery shopping are just a few examples of activities that drought may create problems in.

Life without non essential water use is an inconvenience and it would make daily tasks significantly more difficult, however these inconveniences are small when compared to the necessity of having water available for essential use. For example, the recreational swimming facility being shut down doesn't seem as devastating as not having a large enough water supply for citizens to drink, cook, or clean.

Therefore it is vital that we properly manage our water usage to maintain a reliable supply for the public's essential needs and in doing so reduce the stress on our water systems during a drought.

By being proactive about water management during a drought we can avoid the worst case scenario of running out of water and we can limit the social and economic consequences for the City of Camrose.

During a drought actions need to be taken or one won't need to be worried about when they'll get to go swimming but rather when they might get to take their next sip of water.



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University of Alberta students at the Augustana Campus have partnered with the City of Camrose's Department of Community Development. The goal of this partnership is to design and deliver projects to boost the City of Camrose's resilience if and when it may experience environmental stressors.

This article is the first of four from an undergraduate team, in the Community Partnership course, dedicated to researching the impacts of drought and communicating how residents can mitigate these effects by making reasonable lifestyle changes.

For easy access and more information, check out the City of Camrose website for more policies and regulations on water usage. These articles will also be located on this website for access.

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DROUGHT POLICIES IN CAMROSE

Imagine a world where anyone could use water without any restrictions. An entire swimming pool's worth in an afternoon, sure. Enough to fill up a bottomless pit, why not? This would be wonderful, except it is not sustainable, and we would eventually run out of clean water for people to drink.

Fortunately, there are drought policies in place to prevent scenarios like this from happening. The City of Camrose currently has a water conservation policy to effectively manage water supplies to all parties within the City during water shortages. If water supply is at risk for any reason, the City's policies will be enforced through the Water Use Bylaw.

There are four stages in the City's Water Use Policy, increasing in restrictions as the risks from a drought become more severe.

The first stage is public advertising, with notifications in the newspaper, radio, and other educational platforms. At this point, there aren't any restrictions in place, but water conservation is advertised and encouraged with aims to decrease water consumption by 10%.

The second stage involves limiting water use for personal and business properties to certain time restrictions. For odd number addresses, people are allowed to water their lawn on odd days and even number addresses can water their properties on even days. These restrictions allow three to four hours of watering from 6am to 9am and from 7pm to 11pm. Each time, watering must be done by hand from a watering can or a trigger nozzle. Lastly, sprinklers, water toys, and smaller swimming pools can only be used when people are actively playing.

Stage three involves the ban of all outdoor and non-essential water use such as washing cars or buildings, and recreational uses such as sprinklers and water toys. However, there are some exceptions to allow watering of flower beds and gardens by hand only, using watering cans, or hoses with triggers for restricting water flow.

Stage four of Camrose's Water Use bylaw occurs when the water supply is under critical conditions. This stage means no one is allowed to use water



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outside for any reasons including gardening. Under stage four the sale of large quantities of water by the city is completely restricted. The aim is to cut down water use to 50%. This stage requires a huge effort from the whole community, to reduce water usage, and ensure there's enough water for essential things, such as hygiene and drinking water.

To inform everyone about these protocols in stage four, the city will do more than just the regular announcements and signs. Information will be spread by going door to door, informing every person of the severity of the situation and the actions that are required.

For places like parks, pools, and golf courses, there are emergency plans to use as little water as possible. Stage four is all about making sure we all do our part to save water, by stressing how important it is for us to work together to protect our water supply during this critical time.

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HOW TO CONSERVE WATER

Water is one of the most valuable resources on Earth. We use it for a variety of functions that keep us healthy such as drinking, hygiene, and cooking. On top of that, water is also used for a variety of recreational sports from swimming, skating, and motorsports. With a limited supply of water, these life necessities would be at risk for all of us and recreation would be eliminated. When necessary, functions for life are deprived, people are at risk for more health risks and a lower quality of life. Luckily, there are actions that individuals can take in their own lives that can help conserve our shared water supply.

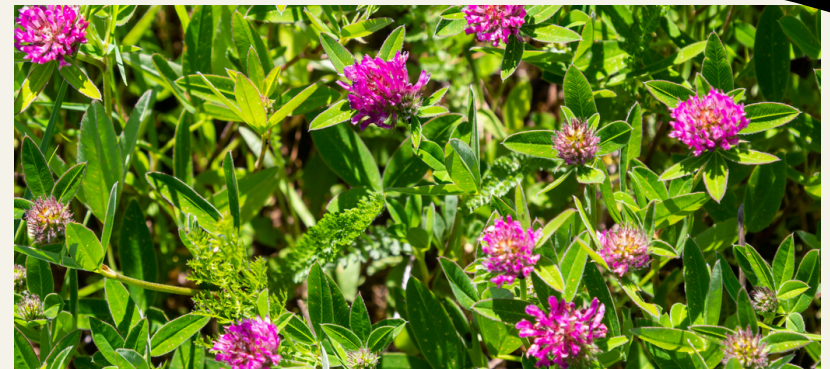
There are multiple small daily actions a person can take that would help minimize struggles during a limited water supply. The best place to examine first is one's own home. Washrooms and kitchens often use large amounts of water in comparison to other rooms in buildings.

Even small steps in the washroom like turning off the tap when not in use, taking shorter showers, and switching to a water-saving showerhead can add up over time and aid in conserving water. These actions are relatively cheap and do not cause harm or a decrease in one's quality of life, while still benefiting the shared water supply.

Simple and efficient water conservation in kitchens involves filling the sink instead of running water, only running a full dishwasher, and fixing leaking faucets.

There are other low effort actions that an individual can take throughout the rest of their homes as well. Small and easy ways to be sustainable can include having a water bottle in the fridge instead of waiting for a tap to get cold or only running a full load in the washing machine. Just being mindful of how water is being used in one's home can in turn help us all in case of a water shortage emergency.

Next, there are ways to conserve even more water when considering outdoor hobbies and maintenance. Collecting rainwater to be purified or otherwise used in large containers is one way. Gardening and lawn care is another hobby that can benefit from limiting water use. Try considering things such as water-saving hose nozzles, reusing water from the home, and plants that do not require lots of water such as spider plants, red edged dracaena, aloe, or Boston Fern.



“clover lawns require less watering than grass lawns and are inexpensive to maintain”

Clover lawns are also great plants for saving water, as they require less watering than grass lawns and they are inexpensive to maintain. These actions might require more monetary value, but in the long run can be easier to sustain and can greatly assist in the case of a drought.

The city of Camrose has critical facilities and programs that require water for health and safety that would be exempt from drought policies. However, even businesses that require water can be cautious and attentive towards water conservation. If each individual, whether running a business or at home, can be mindful towards conserving water then all of these small actions will accumulate and assist in the overall conservation of a limited water supply.

The priority is for everyone to self observe and be aware of how they can aid in everyday activities to conserve water within their own homes and businesses. The water system is crucial for survival and the faster we can start addressing these practices, the better. It costs no harm to be mindful.

This article is the third of four articles from an undergraduate team, in the Community Partnership course, dedicated to researching the impacts of drought and communicating how residents can mitigate these effects by making reasonable lifestyle changes.

For more information, please visit the city of Camrose's website, Alberta Municipalities website, or the government of Alberta's website.

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WHAT TO DO IN A
WATER EMERGENCY

Millions of dollars are spent on water crises in Alberta and in the recovery following these events. Canmore is one example where one of the mitigation projects was budgeted at almost 40 million dollars, and the others added up to another few million dollars.

Costly scenarios like this could be minimized if people prepare for droughts in advance and know what to do when a water crisis occurs. This is especially true for individual residents and small businesses that need a steady supply of water to function.

It is no surprise that water and utility prices rise during droughts, but by preparing your household or business for them, costs can be decreased dramatically.

In terms of drought preparation, it is a good idea to fix any leaking pipes or appliances, as well as have water efficient appliances, and turn off water-softeners while away for multiple days. For outdoor use, try to install water efficient plants and decor, on top of collecting rainwater if possible.

Aside from long-term conservation, gathering emergency water supplies is an essential first step. Creating a rationing plan for each member of the household is very important, so that everyone knows how much water they can use during emergencies. Alberta Health Services recommends at least a three-day supply of food and water during emergencies, which includes 12 liters of water per person.

Stocking up with bottled water when possible is always a good idea in case a drought occurs unexpectedly. If this is not possible, having clean and airtight containers to store water that is either clean, bleached, or boiled is essential.

During a drought it is useful to take short showers instead of baths and to avoid letting sinks run while brushing your teeth or shaving. Washing laundry and dishes only when there is a full load is also a great way to save water in an emergency. Collecting and reusing any water that would normally be unused can add up overtime and save more than might be expected.

Watering plants, gardens, or lawns should be done sparingly during a water crisis, and only at morning or night when temperatures are colder. In extreme



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cases, letting lawns and gardens die in favor of tree and shrub growth is encouraged.

For specific restrictions that are in place during the water crises, The City of Camrose’s water policy is a good document to find more information. Most official health organizations will usually have more details and tips on getting through droughts.

This article is the fourth and final article from an undergraduate team, in the Community Partnership course, dedicated to researching the impacts of drought and communicating how residents can mitigate these effects by making reasonable lifestyle changes.

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