



Water Quantity and Climate Change

How might Climate Change impact water quantity and allocation rights in Alberta?

Quick Facts



Western Canada is warming at 3 times the global rate.



Agriculture and oil and gas—Alberta's biggest industries—require significant quantities of water to operate.



Water demand in Alberta is increasing, while headwater flows in the Rockies are diminishing.



Alberta's water usage has become more efficient in recent years. While increases in water usage are due of population growth.



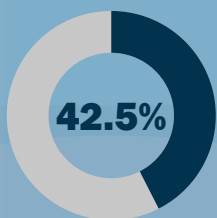
Alberta sources the vast majority of its water from surface sources, such as rivers and lakes.



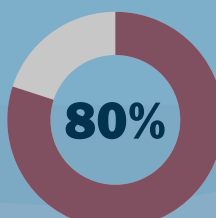
Albertans living adjacent to a water body or above a source of groundwater have the right to use up to 1250 cubic meters of water per year for human consumption and sanitation.

Predicted Impacts of Climate Change

- Changes in location, duration, and intensity of precipitation may impact agricultural viability in some regions.
- Inter-annual variability in precipitation may lead to periods of drought, followed by periods of extreme precipitation.
- Snow melt is predicted to occur earlier in the spring, and there may not be enough snowpack to sustain flow during the later summer months.
- Overall decreases in river flows, especially in the eastern slopes of the Rocky Mountains
- Changes in the timing of peak river flows.



Irrigation licenses account for 42.5% of Alberta's total water allocations



80% of Alberta's water is found in the northern part of the province, while 80% of demand comes from the southern half of the province. This leads to allocation issues in southern Alberta that may be exacerbated further by climate change.