

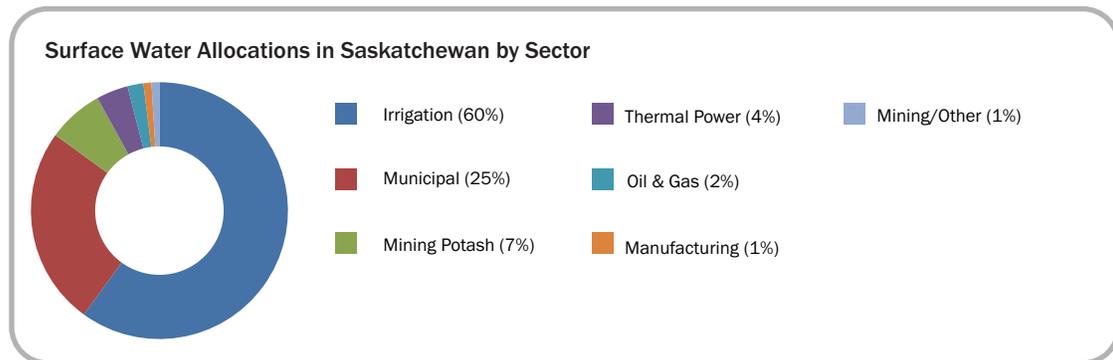
Water Allocations

Why it matters

An important factor to consider when assessing the health of Saskatchewan's water is allocation. This is the percentage of total natural flow that is earmarked for specific human activities.

In Saskatchewan, the main uses for surface water are irrigation and water provided to homes by municipalities. These two sectors consume more than 80 per cent of the surface water used in Saskatchewan.

About 27 per cent of municipal and communal waterworks in Saskatchewan use surface water to serve about 57 per cent of the province's residents, or approximately 651,000 people.



What is happening

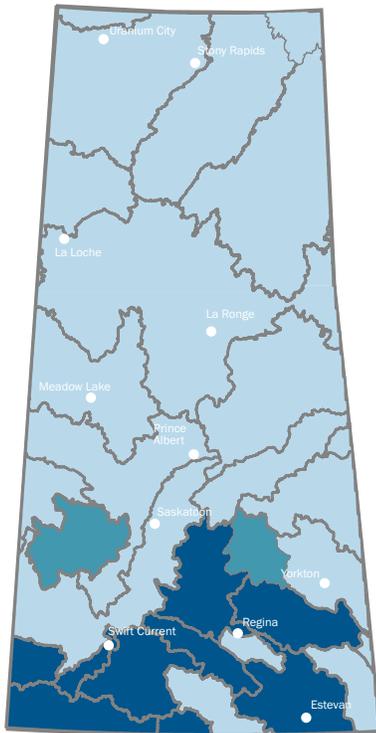
Twenty of the watersheds in Saskatchewan currently have a surface water allocation ratio of less than 35 per cent. The remaining nine watersheds all have surface water allocation ratios greater than 40 per cent, which has the potential for placing high stress on these watersheds. These values do not represent the actual water used or consumed, but rather the amount of water that is allocated for use. The majority of licensed allocations do not consume the full amount they have been allocated. The surface water allocation rating takes into consideration the Prairie Provinces Water Board's 1969 Master Agreement on Apportionment. Under this agreement, if a watershed is part of an international or inter-provincial basin, the Province of Saskatchewan must provide 50 per cent of the estimated median annual flow to the receiving jurisdiction.

Surface water allocation ratings fall into three categories:

- **Low intensity:** Surface water allocation and losses are less than 20 per cent of the natural flow.
- **Moderate intensity:** Surface water allocation and losses are between 20 per cent and 40 per cent of the natural flow.
- **High intensity:** Surface water allocation and losses are greater than 40 per cent of the natural flow.

The surface water allocation ratio was obtained by dividing the annual diversion (surface water allocations and evaporative losses) by the natural flow volume. The annual natural flow volume is the estimated median flow in the absence of any human modification, such as dams, reservoirs, irrigation, or allocation.

Surface Water Allocation Ratio



- Low intensity (less than 20%)
- Moderate intensity (20% - 40%)
- High intensity (greater than 40%)

From 2011 to 2015, under wet conditions, there was no shortage of water for allocations. Saskatchewan has typically been able to over-deliver on allocations associated with interprovincial and international apportionment agreements. It is important over the long term for the province to remain conscious of allocations and water use across Saskatchewan to respond to drier conditions.

What are we doing

Surface water allocation in Saskatchewan is regulated by the Water Security Agency, through *The Water Security Agency Act*. The Water Security Agency has the responsibility for administering the approval process for the construction and operation of water supply diversion works, and the right to use surface water.

An Approval to Construct is required for any works where water is to be diverted or impounded from or within its natural channel or bed. Works that require approval include irrigation projects, intensive livestock, multiuser, municipal or industrial water supply systems, dams and reservoirs for livestock, domestic, recreational and wildlife, or other water diversion schemes. Any use which will consume greater than five million litres of surface water will require approval from the Water Security Agency.

The Water Security Agency recognizes the importance of flows for the ecological (physical, chemical and biological) health of stream courses. Currently, dams are informally and proactively operated to maintain minimum flows for some specific aspects of ecological health. In addition to maintaining minimum flows, variation and timing of flows can also be ecologically important. WSA is currently researching methods of determining and achieving sustainable flows that can best meet watershed health objectives, while maintaining domestic, municipal, industrial, and irrigation water needs.

The Water Security Agency is leading implementation of a number of actions from the 25 Year Saskatchewan Water Security Plan relating to water allocation systems to:

- Evaluate existing water supplies and future demands for the next 25 years and beyond to determine the need for new infrastructure across the province.
- Investigate alternative measures to increase the delivery of water from Lake Diefenbaker to Buffalo Pound Lake, including evaluation of the feasibility of the Qu'Appelle South Irrigation Project.
- Develop a modern system of water allocation, including a new allocation policy and regulations.
- Review existing water rights licences and assess current water use.
- Determine the existing use of water, level of protection of environmental flows, how much water is available for future allocation, and identify areas where water scarcity may be a factor.