

Human Well-Being



Resilience Beneath the Surface: Monitoring Saskatchewan's Groundwater



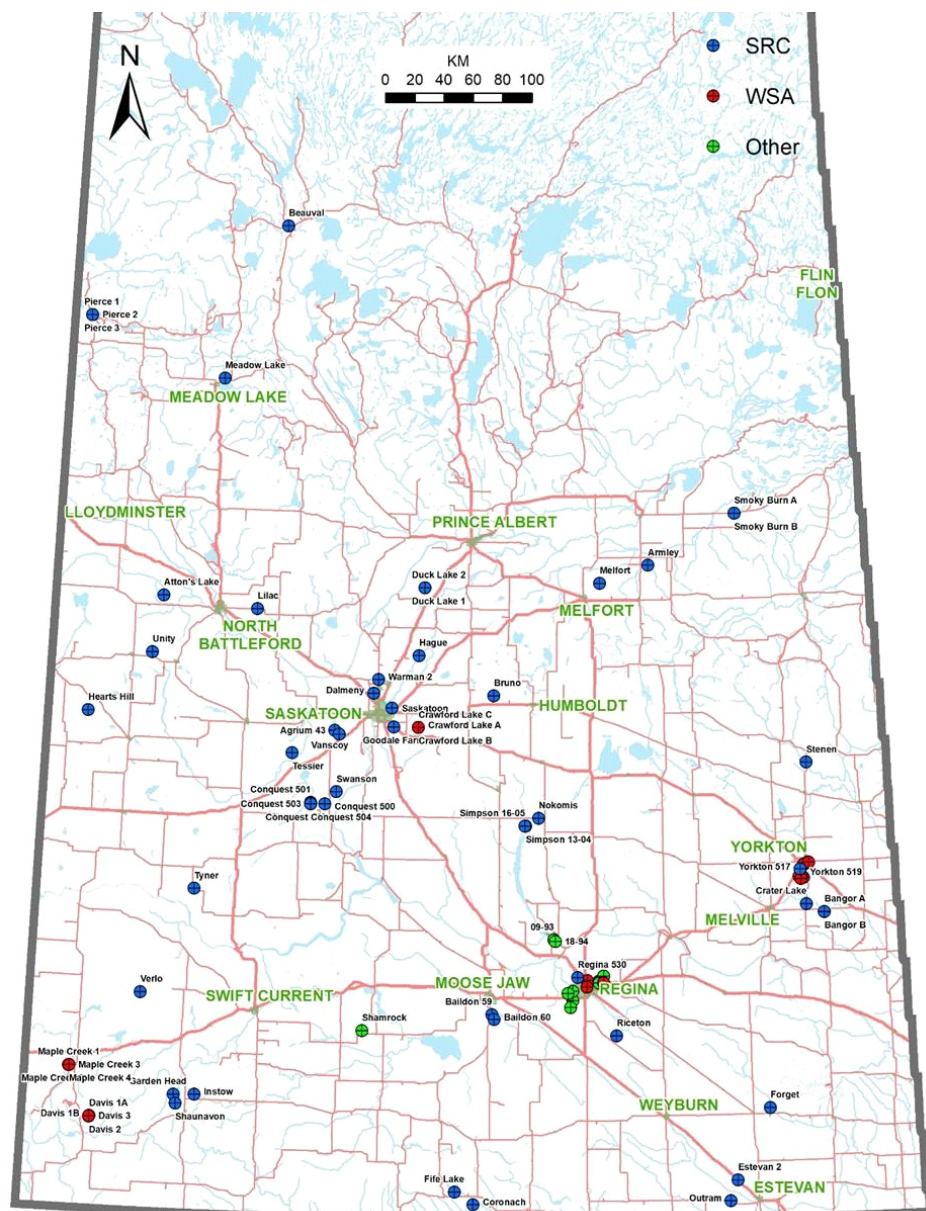
Saskatchewan relies on groundwater to support communities, agriculture and economic activity across the province. To better understand and protect this hidden resource, the Water Security Agency operates the Groundwater Observation Well Network, a long-term monitoring system that tracks groundwater levels and conditions over time.

Observation wells are designed to build long-term knowledge about natural groundwater behaviour as well as study aquifer response to groundwater withdrawals. The Saskatchewan Research Council began collecting groundwater data in the 1960s from several observation wells across the southern half of the province, a network that was later transferred to the Water Security Agency. In the 1990s, the Water Security Agency installed additional wells to monitor groundwater in urban areas with high levels of development and groundwater use. Today, the agency operates 80 observation wells, each equipped with automated instruments and record water levels. Water level data are typically collected in the spring and fall, then processed and plotted on hydrographs that show long-term trends for each well, some of which may be influenced by nearby pumping. Studying these trends illuminates how groundwater systems respond to natural conditions and human activity, such as pumping or land development. These trends provide valuable insight into groundwater conditions across Saskatchewan, helping identify changes in water availability and quality and supporting informed land-use planning and responsible water management.

The Water Security Agency operates 80 observation wells throughout Saskatchewan.



Groundwater observation well within the Saskatchewan network.



Groundwater observation wells throughout Saskatchewan

Why It Matters

Groundwater plays a critical role in supporting drinking water supplies, agriculture, industry and community well-being. The Groundwater Observation Well Network provides early warning of changes that could affect water availability or quality, allowing issues such as overuse or contamination to be identified before they become more serious.

By building a reliable picture of how groundwater systems behave over time, the network supports responsible water management under environmental variability, including dry and wet cycles. It also provides the foundation for groundwater modelling and long-term planning, helping ensure water resources are used efficiently and sustainably. Through careful monitoring and informed planning, Saskatchewan's Groundwater Observation Well Network helps protect a vital resource that communities and ecosystems depend on every day.

Link to Related Information

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