

Feature Stories about Water

Prevention key to keeping invasive species out of Saskatchewan waters

Clean, Drain, Dry! You may have seen posters, highway signs and online ads telling you to clean, drain and dry your boat. Aquatic invasive species such as zebra and quagga mussels must be kept out of Saskatchewan. Once they enter a waterway, they are nearly impossible to remove.

Zebra and quagga mussels have no natural predators in Saskatchewan and can do massive damage to aquatic ecosystems, recreation areas and equipment. Mussel larvae are invisible to the naked eye, and can be brought in with contaminated water on your boat. Adult zebra mussels are so hardy, they can live for 30 days out of water.



Preventing their entry into the province is the single most effective action we can take. Conservation officers and Canada Border Services agents conduct boat inspections to prevent invasive mussels from entering the province. At the same time, monitoring staff and volunteers check our lakes and rivers to make sure that we don't have any established here. No invasive mussels were found in any of the waterbodies sampled in 2016 by the government's monitoring program.

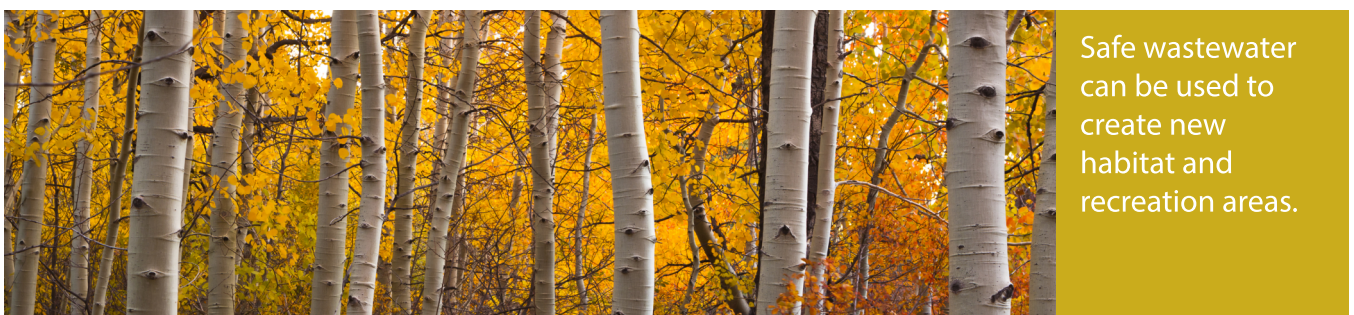
In 2016, the Government of Saskatchewan conducted 776 watercraft inspections and 25 decontaminations. Saskatchewan works closely with other jurisdictions on this issue and will continue to work with other agencies and jurisdictions to coordinate efforts.

The people of the province are asked to do their part to keep our water free of invasive mussels, plants and other species. Clean and inspect your boat, trailer and all related gear. Drain your boat before leaving the boat launch. Dry your boat and gear between trips.

Wastewater finds new life

Saskatchewan's Water Security Agency regulates more than 600 permitted sewage works, and some of those facilities release regulated treated effluent into surface water such as rivers and streams. Other wastewater facilities rely on evaporation to manage their treated effluent. SaskWater is piloting a project that returns treated effluent safely back to the environment through irrigated woodlots.

Specially-selected tree species are able to use approximately three to five times the volume of wastewater compared to traditionally irrigated crops such as alfalfa or hay. The goal of the project is to make use of a high volume of waste water while protecting surface and groundwater quality. Recycling wastewater can reduce water demand, productively recycle nutrients and contribute to soil health. One of the additional benefits of wastewater can be for the creation of new habitat and recreation areas.



Quill Lakes among Canada's most complex water management issues

Saskatchewan's Quill Lakes are large saline lakes located north of Last Mountain Lake in central Saskatchewan. There once were three lakes. Over the years, water levels have risen and formed one large lake, flooding thousands of acres of farmland and threatening infrastructure. The situation in the Quill Lakes is one of the most complex water management issues in Canada.

The lakes are internally drained, meaning the furthest downstream lake, Big Quill Lake, does not have outflow under normal precipitation and evaporation conditions. In fact, the lake has not had outflow in recorded history. Water entering the Quill Lakes is principally lost through evaporation and water levels fluctuate based on precipitation patterns. Water levels in the Quill Lakes have experienced a rapid increase over the past dozen years.

Water levels in Big Quill Lake have increased by around 6.8 metres (more than 22 feet) since a low point in 2004. The Quill Lakes are saline due to long-term accumulation of salts from runoff entering the lake and water then being lost to evaporation. Salinity in the lakes varies depending on water level, especially in Big Quill Lake. Salinity has varied from over 70 g/L when water levels are low, to less than 10 g/L when water levels are high. To put that in perspective, the salinity of the ocean is around 35 g/L.

In 2007, the Water Security Agency (WSA) monitored water quality on the Quill Lakes at several locations. More recently, WSA conducted localized monitoring of Big Quill Lake in 2012 and 2013. Increased monitoring of the Quill Lakes in 2014, 2015 and 2016 was conducted to assess water quality variation in the main bodies of Big, Middle and Little Quill Lakes.

WSA monitors three stations on each of Big and Little Quill Lakes, and one station on Middle Lake (also known as Mud Lake), twice per summer. WSA also monitors other waterbodies and watercourses in relation to the Quill Lakes to support understanding of various management options.