

# Economic Impacts of The Quill Lakes Flood...

## to The Agriculture Crop Sector

Agriculture in Saskatchewan is the only industry that has a multiplier affect of **4 to 1**.

*Products produced add value to the economy as they are passed on through the system to trade or consumption.*

**In the Quill Lakes region (5b) an average acre in 2015 produced \$324 worth of crop<sup>1</sup>.**

In 2016 there were approximately **33,579** acres of private farm land under water.<sup>2</sup>

$$33,579 \times \$324 = \$10,879,596 \text{ (actual crop not grown)} \times 4 \text{ (multiplier)} =$$

**In 2016 in crops alone \$43,518,384 was lost to the economy of Saskatchewan.**

- This does not include
  - losses to the livestock and recreation sector
  - losses throughout crop lands in the watershed due to high water events
  - losses to business, municipal and provincial infrastructure, and private property.

Big Quill has risen over 6 meters (600 cm) in 12 years. There is 75 cm until the “natural overflow begins, and 110 cm until the water can leave the lake as fast as it comes in, through its natural outlet.

**If not prevented... At full overflow,**

**approximately 87,000 acres of land around the lakes will be flooded.**

$$87,000 \times \$324 = \$28,188,000 \text{ worth of crops} \times 4 \text{ (multiplier)} =$$

**\$112,752,000 in losses will occur “annually” at natural peak overflow.**

(\$1.12 Billion per decade until land recovery, estimated at 50 -60 years)<sup>3</sup>

The potential annual savings for the provincial economy...

**with a stabilization of the lake levels at today’s elevation of 520.72 m.**

Would be up to \$112,752,000 - \$43,518,384 = **\$69,233,616... each year**

The sooner the action the greater the savings!

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<sup>1</sup> Calculated from Sask ag and Food/Statistics Canada 2015 crop production by region report, and 2016 Crop Insurance base rates for crop values. The 5 top acreage crops, Canola, HR Spring Wheat, Barley, Oats, and Peas were calculated as average acres, as a percentage of total.

<sup>2</sup> Calculated from Lake Levels/Acreage under water figures provided by Minister Herb Cox at the time of the Kutawagan proposal during the summer of 2015.

<sup>3</sup> *Note: recovery time for saline flooding takes considerably longer than fresh water recovery, based on previous receding periods in lake history. With considerably lower rates of Total Dissolved Solids, recovery time will be quicker, but no estimates have been found as of yet.*

There is an average of 387.096 acres lost around the Quill Lakes with every centimeter rise in water levels. There was a rise in 2016 of 27 centimeters from spring to fall, a total 17 centimeter rise from 2015 to 2016.<sup>4</sup>

$387\text{cm} \times \$324/\text{acre} = \$125,388 \text{ per centimeter/yr} \times 4 \text{ (multiplier)} =$

$\$501,552 \text{ per centimeter rise} \times 17 \text{ cm (actual rise)} =$

**In 2016... There was an \$8,526,384 “rise” increase in annual losses.**

**There will be an additional \$501,552 per centimeter annual rise in losses**

**Note... Storing water on productive farmland**

**still averages \$324 per acre**

**regardless of where you store it!**

The argument can be made that the costs of holding back water, needs to be weighed, in comparison to finding a release of excess water.

Crop losses annually due to flooding at the Quill Lakes level are rising. The landscape is currently saturated from many years of excess rain, and late fall weather conditions. The creeks were running heading into freeze-up. There is very little absorption room left, so all accumulated snow fall, and spring rain events will run off in Spring 2017.

The Quill Lakes Watershed region is predominantly located in zone 5b. 5b has some of the highest avg. yields, and highest total volume of production of crops in the province. It has the second highest volume of oats in the province, and the highest avg. yield of peas.

We are experiencing the highest continuous wet cycle in the history of European settlement in Western Canada. It is a climate shift, or cycle that geological records suggest have happened before our time here. Predictions of the length of the severity have been cited as possibly lasting until the year 2030. This is an estimate, but we do not know how long the cycle will last. We don't know if this is

**the “new normal”.**

We don't know if there are significant influences created from human activity to cause this cycle to act differently, last longer, or be more severe. We don't know if we have experienced the worst storm, or the worst runoff event.

What we do know is we have the technology and the engineering to manage excess water to the benefit of our economy. The longer we wait, the more it will cost, and the longer our recovery time.

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<sup>4</sup> Calculation from centimeters remaining until overflow, and total acres lost, are averaged out to a per centimeter measurement. Actual numbers may vary based on the flat distance differences, due to slope of the landscape covered in each cm rise.