

Food Processing Wastewater Survey

Background

The food and beverage manufacturing sector uses a significant amount of water for processing. The water footprint for many food and beverage products — including the farming, food processing, retail and consumer stages — are often orders of magnitude larger than the volume or volume equivalent consumed. For instance, one cup of tea, one cup of coffee, one kg of beef and one kg of chocolate require 30 L, 280 L, 15,000 L, and 24,000 L of clean water to produce, respectively. Many food processors locally and internationally — such as PepsiCo, the Coca-Cola Company and Maple Leaf Foods — are decreasing their water footprint based on a combination of environmental, social, and economic drivers.

There are multiple pathways to decrease the overall water footprint in the food processing industry. Water usage can be minimized through logistic improvements that increase process efficiency while decreasing water consumption. Alternatively, wastewater can be captured and treated for re-use; however, contamination and health risks must be strictly tested and controlled. Due to the wide range of contaminants in food processing wastewater, multiple treatment technologies are often applied.

In the first phase of this project, we will reach out to over 500 commercial food processors and industry associations in Alberta to gather information related to their water usage and wastewater discharge. The data gathered is expected to help provide practical, statistical, technological insight into the food processing industry regarding wastewater generation and treatment. It then help:

- Provide policy input and direction from Agriculture and Forestry's perspective toward Environment and Parks' water reuse sustainability framework
- Form critical partnerships with academia and industry that will help Alberta food processors to become more globally competitive
- Develop in-house testing and research capabilities within the Bio-Industrial Opportunities Section and allow government to play a leadership role in developing the food processing industry

For more information:

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