

Pathways to Sustainability: Sustainable Wastewater Compliance at Fruition Fruits & Fills

FRUITION FRUITS & FILLS (a division of Tim Hortons) produces donut icing and fruit fillings at its production facility in Oakville, Ontario. As with many food and beverage manufacturers, residual ingredients, products and sanitation chemicals in wastewater contributed to wastewater effluent compliance concerns (pH and Biochemical Oxygen Demand (BOD)).

Conventional Approach

A conventional engineering approach would involve construction of end-of-pipe neutralization and biological treatment facilities, which would be expensive, consume valuable real estate and require handling of hazardous acids and bases.

Sustainable Approach

Fruition retained Enviro-Stewards Inc. to conduct a pollution prevention (cleaner production) assessment under the Toronto Region Sustainability Program. Enviro-Stewards provided resource conservation training to Fruition staff, led a baseline assessment and identified economically viable conservation opportunities.

Results

From 2007 to 2010, the facility's production increased by 60 percent. Even so, the volume of effluent decreased by 60 percent and the

effluent BOD loading decreased by 80 percent (i.e. 75 percent and 88 percent, respectively, per tonne of production).

At present production rates, the facility is **saving approximately \$490,000 per year** in energy, water, ingredients, surcharge and landfill fees. The net payback period for the combined investment was several months.

Beyond Compliance to Sustainability

During the course of the work, Don Bell, Fruition's General Manager of Manufacturing, expressed an interest in sustainable income-generating projects initiated by Enviro-Stewards in South Sudan (see <http://www.youtube.com/user/EnviroStewards>).

Fruition cleaned a number of its 20L ingredient pails for Enviro-Stewards to include in a shipping



Bruce and Don inspecting water purifiers constructed in South Sudan.

container sent to South Sudan. These pails are now being used by a women's group to store solar-dried mangos for sale during the off-season.

Also, Fruition purchased 40 Sustainability Credits in the form of biosand filters from Enviro-Stewards. The filters provide 800,000 litres of safe drinking water and avoid more than 120 tonnes of carbon emissions that would otherwise have been necessary to boil a portion of this water to make it safe. In November 2010, Mr. Bell inspected the Sudanese biosand filter installations with Enviro-Stewards' founder, Bruce Taylor.

About Enviro-Stewards



Enviro-Stewards
Engineers & Scientists

Enviro-Stewards is an international environmental engineering firm that helps

build economically, environmentally and socially sustainable leaders. Our conservation-based approach invariably generates higher returns on investment than conventional engineering approaches. If you would like to discuss services that could potentially assist your facilities, contact us at: 519-578-5100 or mail@enviro-stewards.com,

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