Sustainable Resources Group

Brewer Stopped Sending Money Down the Drain

A case study from the Sustainable Resources Group, Inc.

CASE STUDY

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Waste isn't just bad for the environment – it's also bad for business.

In addition to creating materials and getting no value from them, failing to beneficially reuse waste can take a bite out of an organization's bottom line. Getting rid of that waste can become a huge expense due to transportation, disposal, and other costs.

Here's one example of an organization that was paying too much for its sewer discharge.

The company got help from Sustainable Resources Group, Inc., (SRG), a full-service sustainability solutions provider, to find sustainable ways to reuse some of its process wastewater so it could avoid many of those costs and free up money to increase production.

The problem: High sewer surcharges

The company in this case was an East Coast brewery that had recently purchased a new production plant. The brewery hired SRG to manage liquid waste created at the new plant in a more beneficial and sustainable way.

The brewer's goal was to spend less on sewer surcharges and concentrate on increasing production capacity.

The problem was the high strength processing wastewater the brewery was sending down its drains into the sewer. Because of the high concentrations of sugars, grains, and other processing residuals, the biochemical oxygen demand (BOD), suspended solids, and nitrogen levels exceeded local limits. Therefore, the brewery was being assessed a high surcharge from the local sewage authority for treating the waste.

Solution: Collect process wastes upstream before they are contaminated

The brewery had already been recycling the brewer's grains left over after beer is processed and selling it as animal feed to local dairy farmers – that's common practice in the brewing industry.

SRG's goal was to collect residual materials that were generated in other stages of the brewing process.

The waste recovery area was the first stop. Process water from the initial brewing stage contained high levels of suspended solids. SRG worked with plant engineers to divert this material into existing holding tanks, rather than send it into the drain. SRG transports and land applies the recovered water.

Another area focused on was the diatomaceous earth filter area where beer is filtered. The spent diatomaceous earth material was being taken to a landfill for disposal. However, SRG obtained permits which allowed this material to be utilized as an amendment at a local compost facility.

The next step was managing the liquid product spilled during filling operations on the keg line. During this process, the kegs are filled until they overflow, and then the kegs are corked. Before, the spillage went down a drain to the sewer, but SRG worked with brewery engineers to use existing tankage in the basement to collect this material.

SRG then assisted the engineers in designing a pipeline that sent the spillage from the basement to an area accessible to SRG vacuum tankers where it could be collected and beneficially reused.

The final stage was collecting the waste from dated or damaged merchandise. That unsold beer brought back to the brewery is run through a bottle breaker to separate the glass and product. The liquid is pumped into a holding tank rather than discharged into the sewer, and SRG transports the material for beneficial reuse.

Multiple outlets get the most value

SRG evaluated the waste materials to determine the optimum way to recycle and reuse the material. The methods utilized include sending it to a digester to generate energy, composting to create a soil amendment, utilizing the nutrients in the waste as an agricultural fertilizer, and using it as an amendment in animal feed.

Using a variety of approaches allows SRG to beneficially reuse the waste material at its highest level.

SRG manages tanks throughout the plant and collects and processes the material on an as-needed basis, providing full turn-key management of the brewery's liquid waste management operation.

The results: 6 million gallons diverted, $500,000 saved annually

By going upstream and collecting residuals, SRG prevents approximately six million gallons of high strength liquid waste from being sent to the sewage treatment plant each year.

The cost of SRG handling that waste is less than what the brewery would otherwise have to pay in high strength surcharges to the sewer authority. The brewery is saving approximately $500,000 a year by avoiding those surcharges.

In addition to saving money that can be used to increase production and profits, the brewery's operations have become more sustainable. The waste is beneficially reused instead of discarded, and less energy is required to process high-strength waste at the sewer authority.

About SRG:

Sustainable Resources Group, Inc., is a full-service sustainability solutions provider that offers a broad range of environmental services to help facilities meet today's growing demands for compliance, sustainability, and green initiatives.

To learn more about how SRG can help your organization, contact Tom Krall at 610-840-9200 ext. 107.