



GEMI[®]

Collecting the Drops:

**A Water
Sustainability
Planner**

Case Example

ConAgra Foods: Saving Through Water and Energy Reuse at an Idaho Processing Plant

A Lamb Weston potato processing plant in American Falls, Idaho, captures water and energy from an existing wastewater stream coming from the boiler room, and reuses it at the waste treatment plant. The application could be used in any facility that uses water to cool the air compressors and does not recover the heat from this water.

The 2004 project involved installation of a pump tank to collect the compressor cooling water and 100 gallons per minute pumping and piping system to transfer the water to the clarifier area. A tank that was in the bone-yard was reused, and a pump and piping equipment the plant purchased for approximately \$10,000 (USD).

The project was undertaken when plant personnel, who look continually for cost saving measures, examined discharge points throughout the facility. They determined that the temperature of the water discharged from the boiler room was elevated. The discharge from the boiler room included boiler blowdown and compressor cooling water combined.

Because boiler blowdown water is extremely high in minerals, it was clear that the complete waste stream could not be reused as a hot water source for the clarifier operation without causing operational problems. Consequently, the plant separated these two water/energy sources, quantified the flow and energy available in both streams, and calculated the savings potential at the identified reuse point.

This project reduced the plant's water usage by 44.35 million gallons per year, saving \$1,621 in electrical costs associated with pumping the water from the plant. Energy cost savings are calculated at \$96,303.