



## Utah Department of Environmental Quality

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### Case Study: Intermountain's Central Laundry

#### **Summary:**

Intermountain's Central Laundry, located in Woods Cross, is reaching its goal of minimizing its impact on the environment by not only making its operation more energy and water efficient, but also by purchasing products that are less damaging to the environment. The decision to conserve natural resources has paid dividends in many ways. **"At the Central Laundry, we have the opportunity—and the responsibility—to contribute to a safe environment for our patients, and a better environment for the communities we serve,"** says Richard Bott, Intermountain's Director of Linen Services. **"We take that responsibility seriously."**

#### **Background:**

Intermountain's Central Laundry has been in existence since 1978. The laundry employs 102 individuals and processes a wide array of linen for the entire Intermountain hospital system in addition to the University of Utah's. In 2008, the facility processed 20 million pounds of linen.

#### **Environmental Benefits:**

To reduce water usage, Central Laundry employs an efficient continuous batch washer or "tunnel" washing system that uses .56 gallons of water per pound of laundry, compared to the national benchmark of 1 gallon per pound. Further water savings are achieved by recycling rinse water into wash water, reducing water consumption by 40%. With these new technologies, Central Laundry was able to save over 13 million gallons of water in 2008.



**Central Laundry's water efficient batch washer**



To reduce energy usage, Central Laundry installed a heat recovery unit which strips heat from outgoing wash water and uses it to preheat the incoming water. This heat recovery system reduces the energy costs by 18% to 20%. Additionally, Central Laundry employs an inverter drive that eliminates spikes in energy use, resulting in energy savings. More energy savings are acquired in the drying stage through equipment upgrades that remove water from the linen more efficiently prior to drying. These equipment upgrades have proved their worth by reducing drying time from one hour for 250 pounds of laundry to 20 minutes.

Laundry facilities can have a significant impact on aquatic organisms, due to chemical usage. Central Laundry has made a commitment to minimize its impact on the environment by switching to a laundry detergent that does not contain Nonylphenol Ethoxylate, known as NPE; a nonionic surfactant that may harm aquatic organisms. The new detergent not only makes a positive environmental impact but it's also less expensive, which improves the bottom line. Central Laundry has also switched to an organic peroxide that is more environmentally friendly and performs better than the traditional chlorine bleach at lower water temperatures, thus reducing energy usage. A high-tech chemical dispensing pump further reduces chemical use by dispensing small amounts of chemicals, if that's all that is needed.

Intermountain's Central Laundry has further demonstrated its dedication to the environment by purchasing linen that has been designed to be laundered using less water and energy, with an added benefit of a longer service life. Employees are being educated on best management practices to ensure better linen utilization and less waste, such as stocking less linen in patient rooms to avoid laundering unused linen.

Through all of its environmental programs, Central Laundry has found that less waste equates to lower costs and a better use of resources.

**New energy and water efficient laundry equipment at Central Laundry increased production by 35% with less than a 15% increase in energy use.**