Fact Sheet: **Laundries**

This information applies to in-house laundry facilities, such as those used by hotels, hospitals & aged care facilities, rather than commercial dry cleaning and laundry facilities.

The amount of energy and water used by laundry facilities, as well as chemical and labour costs, can have a significant impact on total operating costs.

Heavy reliance on chemicals also places an unnecessary load on sewerage systems and contributes to environmental pollution.

Best practice

Best practice water use for washer-extractors with and without reuse.

Rating	Water use without reuse (litres oer kilogram of linen)	Water use with reuse (L/kg of linen)
Good	17 - 22	12 - 15
Fair	22 - 26	15 - 18
Poor	>26	>18

Water is reused from specific cycles, such as the final rinse, via temporary storage tanks. (Source: Sydney Water EDC documents)

Potential water-saving opportunities

Behavioural change

- Send laundry to commercial facilities. (Check the water efficiency rating of the selected laundry).
- Reduce washing requirements through education. For example, hotels and other facilities may minimise towel washing by asking patrons to hang up towels rather than leaving them to be washed every day.
- Consider using a heat exchanger to transfer heat from wastewater to preheat incoming cold water.
- Operate machines only when fully loaded.
- Load machines correctly to manufacturer's specifications.
- Pre-sort garments, linen, etc. before loading the machine.
- Adhere to the manufacturer's recommended setting and regularly check that the water level is correct during operation. Correct levels also assist in mechanical action during the wash cycle.
- Discuss ways that you can reduce water consumption with your laundry chemical supplier. Ensure the right amounts of chemicals are used to minimise their impact on wastewater quality.
- Turn off and isolate the steam supply to equipment when not in use. This will conserve energy required for heating and reduce the make-up water demanded by your boiler.

Equipment modifications

- Most commercial washer-extractors can be retrofitted with a tank to save the final rinse water, which can then be reused as a pre-wash in the next load. The storage tank can be fitted within or on top of each machine, or located separately and supplied by pump.
- If your dry cleaning machine is water cooled, assess the possibility of converting the cooling operation to a closed system.

Reusing water from the final rinse cycle in the next load can cut water consumption by up to 30 per cent.

- Consider other alternatives or systems that may complement conventional laundry practices. Ozone is a powerful oxidising agent used in many applications from water treatment to food processing. Injecting ozone into the wash formula reduces the need for chemicals, hot water and energy because ozone allows washing in cold water. Using ozone may also result in savings of up to 40 per cent of drinking water and sewer discharge. Low alkaline systems can also provide similar results.

Equipment replacement

- Review your existing plant. If production levels warrant replacement consider equipment that will provide a return on investment and environmental benefit. For example, perhaps your conventional washer-extractor can be replaced with a continuous batch washer of similar capacity. A batch washer uses a counter-current flow and can save up to 70 per cent of water and steam. The automation also reduces labour costs.
- Ensure your machine is rated 4-star or higher.
- Water recycling technology for laundries is now common practice. Water savings of up to 85 per cent can be achieved with these systems so they are worth investigation.

Maintenance

- Regularly check for leaks and ensure all staff know how to report leaks.
- Ensure equipment is well maintained. Develop a regular maintenance schedule.
- Ensure all pipes (including hot water) are lagged.
- Ensure all inlet solenoids and discharge valves are operating correctly.
- Check for correct installation of steam and condensate return lines.
- Check for correct operation of steam traps.
- Check the need for a condensate return pump.
- Complete an energy audit of your plant.

Information for this fact sheet has been adapted from the City West Water "Water Conservation Solutions Handbook"

Further information

Western Water

1300 650 425

www.westernwater.com.au

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