

Fact Sheet: Fire protection systems

All commercial and institutional facilities must inspect, test and maintain their fire protection systems regularly. Their systems and equipment must be ready to operate at all times, or a substantial threat to the safety of occupants and property may exist.

Fire protection standards

Recent changes to the Australian Standard AS1851-2005 include:

- Moves to standardised test frequencies, and monthly sprinkler and pump testing.
- Reduced water consumption for system testing.

The Standard reduces the water used for fire system testing by about 75 per cent. These savings result from changing to monthly testing instead of weekly.

Water supply testing, although conducted annually with a benchmark test conducted six monthly, consumes the most water of all the alarm tests combined. As the water for this test is drawn directly from drinking supplies, it is possible to consider a broad range of possibilities for its reuse.

A number of different tests are required for fire protection systems, and these should be investigated for water savings. Further information is available from the Fire Protection Association Australia website: www.fpa.com.au

Changes to the standard may also require the upgrade of some sprinkler control assembly valve sets and some older fire pump sets before the new maintenance standard can be adopted.

Water savings of more than 75 per cent can be achieved if pump testing and tank return lines are connected to on-site water storage tanks. Note, however, that this requires a change to the design standard.

Potential water-saving opportunities

Behavioural change

- Ensure your fire protection system is capable of operating within AS1851-2005.
- Test the system monthly rather than weekly, where practicable.

Equipment modifications

- Fire pumps can be configured to incorporate a test water holding tank or to discharge test water into a greywater system. Install storage tanks and recirculating lines to capture test water for reuse in the system.
- Sprinkler, hydrant and hose reel system drain-down arrangements can be configured to drain to greywater storage systems.
- Sprinkler system drain-down valves can be installed, located and arranged to allow the isolation and drain-down of systems on a floor-by-floor basis or by zone for the larger floor areas.

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

Further information

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www.westernwater.com.au

