

IPOS e-Bulletin

Issue 39 – April 2016

Backflow Prevention

Backflow Occurrences

When irrigating parks and gardens, protection against backflow is required to prevent potential contamination of the SA Water drinking water network in accordance with Australian Standard for Plumbing AS/NS 3500.1:2003. Backflow can occur when water pressure in the water main is less than the water pressure in the internal plumbing system on your site. When this is the case, there is potential to contaminate the water supply.

Increases in the pressure on your side of the meter in the internal plumbing system can result from a number of different circumstances. For example, if a pump is introduced and increases the pressure of the water supply. There may be an alternative water supply interconnected into your internal network that can increase the water pressure. There can also be a decrease in the pressure supplied at the meter when there is high demand on the SA Water network, or there is a supply shut off. This can also result in backflow.

Boundary Containment

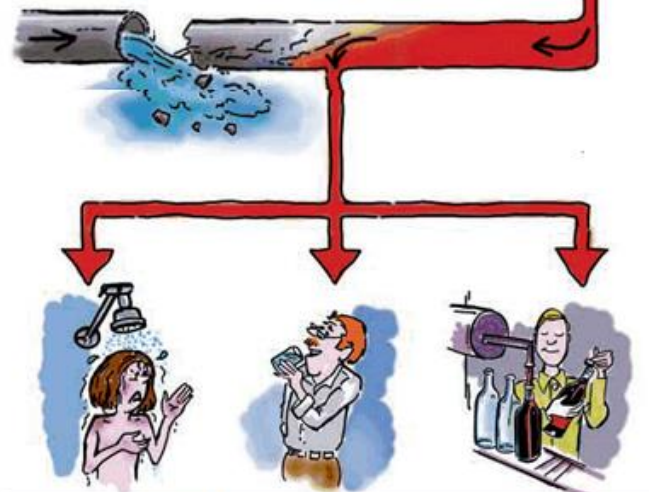
New SA Water domestic 20mm water services are fitted with non-testable dual check devices to provide protection of the network for low hazard domestic use only. Some existing or replacement meters may not incorporate backflow prevention. The owner of the property is responsible to provide and install backflow prevention devices at the property boundary where a potential hazard has been introduced. For more information please click on the link below.

http://www.sawater.com.au/data/assets/pdf_file/0019/26191/Backflow-Prevention-Requirements-Fact-Sheet.pdf

How can *Backflow* occur?

Event 2
The drop in pressure draws dangerous chemicals into the main through a cross connection.

Event 1
Water pressure in a main drops as a result of a break.



Event 3
The dangerous chemicals contaminate the water supplied to customers.

Zone Protection

Sub-surface irrigation systems and systems that introduce root inhibitors, fertilizers or other chemicals require additional backflow prevention to ensure that the drinking water on the property is safe for drinking. Under AS/NZ 3500.1.2003 backflow prevention must be installed on the branch line to the irrigation system.

Irrigation systems interconnected with rainwater, recycled, bore water or other alternate sources will require additional protection to ensure that the drinking water is protected from the irrigation supply.

Recycled Water Systems

Domestic applications generally do not require backflow prevention on the recycled supply. If irrigation or other onsite hazards (root inhibitor, fertiliser Injection, high hazard site, etc.) are present, a risk assessment will need to be performed to determine the level of backflow prevention required.

Risk Assessment

To determine the level of backflow prevention required on a reticulation system an appropriately licensed contractor will need to be engaged. The contractor will determine the level of risk, required backflow device/s and appropriate locations (as per AS/NZ 3500.1.2003).

The Office of The Technical Regulator – Plumbing may be able to provide more information on backflow protection.

www.sa.gov.au/otrplumbing

Tip of the Month

Adjusting your irrigation systems and preparing for the winter

Now that summer has officially ended and we are observing milder weather conditions it's advantageous to adjust your irrigation systems accordingly. Irrigation requirements will gradually scale back over the next few months as cooler weather approaches so be sure to reduce your irrigation frequency.

Some of our customers will also start to 'thicken' up their turf in preparation for the coming winter. This will help the turf withstand the increased rainfall, traffic and muddy conditions. It is worth considering slightly raising the mowing height you cut your turf to promote a thicker coverage and allow for that little bit extra protection as the turf stops to grow as vigorously in winter.

March Irrigation Requirement

Bureau of Meteorology (BoM)

| Station | TQVS 1 (kL/Ha) | | TQVS 2 (kL/Ha) | | TQVS 3 (kL/Ha) | | TQVS 4 (kL/Ha) | |
|----------------------------------|----------------|------|----------------|-----|----------------|-----|----------------|-----|
| | AIR | BIR | AIR | BIR | AIR | BIR | AIR | BIR |
| Adelaide Airport - 023034 | 1036 | 1265 | 524 | 705 | 396 | 564 | 268 | 424 |
| Kent Town - 023090 | 727 | 1111 | 302 | 601 | 195 | 473 | 89 | 346 |
| Mount Crawford - 023763 | 964 | 1125 | 448 | 606 | 319 | 477 | 190 | 347 |
| Noarlunga - 023885 | 1150 | 1211 | 632 | 671 | 503 | 536 | 374 | 400 |
| Parafield - 023013 | 1109 | 1289 | 579 | 717 | 447 | 574 | 315 | 431 |

AIR is the 'Actual Irrigation Requirement' which is based on the current climate data.

BIR is the 'Base Irrigation Requirement' which is based on the average of the previous 7 years climate data.

| Station | Rainfall (mm) | | Eto (mm) | |
|----------------------------------|---------------|-----------|----------|-----------|
| | Current | Long term | Current | Long term |
| Adelaide Airport - 023034 | 39 | 22 | 146 | 160 |
| Kent Town - 023090 | 54 | 26 | 122 | 146 |
| Mount Crawford - 023763 | 52 | 28 | 147 | 148 |
| Noarlunga - 023885 | 23 | 22 | 148 | 154 |
| Parafield - 023013 | 34 | 23 | 151 | 163 |

Disclaimer:

SA Water's Business Relations provides recommendations and suggestions only. It is advised that further investigations are detailed studies are completed before any projects are implemented. All applicable standards & guidelines (Australian, EU, AQUIS, HACCP, Australian Drinking Water Quality Guidelines etc.) should be adhered to, and care should be taken to ensure water and wastewater minimisation programs do not negatively impact health or processing operations.