



March 2005

WELCOME

Welcome to the sixth edition of *Wastewater News*. The name has changed from “*Working with Wastewater*”, however the intent remains the same. You can find an electronic version of this document at our website

<http://www.dh.sa.gov.au/pehs/newsletters.htm#wastewater>

Staff Changes

At the beginning February, Nina Coles joined the Wastewater Management Section. Nina has a Civil and Environmental Engineering degree and has experience in wastewater systems operations, environmental quality systems, and engineering design.

Moth flies

The Wastewater Management Section received a recent query from Peter Timoney (DC Copper Coast) with regard to some interesting "critters" which he came across in responding to a complaint about biting flies "coming from the toilet."

It seems the insects in question were identified as "Moth Flies" which can be found breeding in floor traps etc within houses. We contacted the SA Museum who gave us the following information with regard to these bugs:

Moth Flies (Family Psychodidae) are small hairy moth-like flies which are commonly found in areas where moisture and decaying organic matter are present, this may be associated with septic systems, grease traps etc. When Moth flies are found inside houses they are normally in bathrooms or laundries where there is likely to be a slime build up in the floor traps.

Adult Moth flies cannot bite but there may be some allergic reaction in some people due to inhaled or ingested hairs or body parts from adult flies.

The most common species encountered in Australia is Psychoda alternata

There are also members of the Sub-family Phlebotomus which are blood suckers which are known to harbour arboviruses.

It would seem the best way to treat the insects is to pour hot water from the tap down the floor traps etc. Hotter water was suggested but the maximum temperature the uPVC pipes can tolerate is 60°C (manufacturers recommendation).

Recycled Water at Mawson Lakes

- Reclaimed water is the reuse component of treated effluent from a sewage treatment plant.
- Recycled water can be any type of water that is recycled, eg stormwater, greywater, reclaimed water, or a mixture of these. Hence the Mawson Lakes Scheme is a recycled water scheme as it incorporates stormwater and reclaimed water.

The following article has been kindly provided by SA Water.

Mawson Lakes is a development of 620 Ha with one third of the area allocated to open space. It is a model for environmentally sustainable developments. Mawson Lakes incorporates dual water supply system comprising drinking water and recycled water.

The recycled water is collected and distributed by SA Water and is a combination of two sources: SA Water's Bolivar Wastewater Treatment Plant (75%) and the City of Salisbury's wetlands (25% approx).

Water supplies from the two sources are collected, treated and mixed to an acceptable quality then retained in a storage tank before being pumped to Mawson Lakes properties via a dedicated reticulation network.

The balance storage tank and reticulation pump station are located at Greenfields Recycled Water Facility, adjacent to the Greenfields Wetlands off Salisbury Highway.

Recycled water is delivered by dedicated mains, separate to the drinking water main. The service pipe for recycled water is coloured purple/lilac.

Recycled underground water mains are identified by tape as part of the installation (see Figure 1). The water pressure in the recycled water main is less than pressure in the drinking water main.



Figure 1: Danger Tape for Recycled Water Mains

All properties at Mawson Lakes are supplied with two water meters: one for drinking water; and one for recycled water. The recycled water meter is distinctively coloured purple/lilac (see Figure 2).

Due to cross connection possibilities, the drinking water meter is protected by a dual check backflow prevention device located on the outlet side of the meter.



Figure 2: Recycled (Lilac) and Potable Water Meters



Figure 4: Outdoor Tap and Labelling

It is the plumber's responsibility to contact SA Water to audit each stage of the installation before handover to the property owner. Plumbers are required to submit a Certificate of Compliance to the property owner and SA Water within seven days of completing work.

On completing a recycled installation plumbers are required to notify SA Water so that an audit can be undertaken before commissioning to ensure:

- No interconnection between the recycled water service and the drinking water service; and
- Recycled water is only supplied to toilets and garden taps.

All products connected to the recycled water service must be certified under the National Plumbing Product Approval Scheme and marked with either a Standards Mark or a Water Mark. Pipes and outlets to be used on recycled water service must be clearly and permanently identified 'Recycled Water – DO NOT DRINK' and coloured no darker than purple (P12) and no lighter than lilac (P23). See Figure 3. External recycled water stand pipes must be purple/lilac.

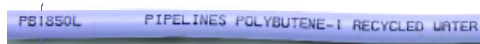


Figure 3: Purple/Lilac Reclaimed Water Pipe

All recycled water pipes, pipe sleeves and identification tapes and outlets shall be coloured lilac/purple and be marked with words similar to the following - WARNING: RECYCLED OR RECLAIMED WATER - DO NOT DRINK. This includes outside garden taps and toilet taps, as shown in Figures 4 and 5.



Figure 5: Toilet Tap and Labelling

The Plumbing Code of Australia

The following article has been kindly provided by SA Water.

National Plumbing Regulators Forum

The National Plumbing Regulators Forum (NPRF) is a co-operative arrangement between jurisdictions and has no executive powers. Forum members represent bodies responsible for regulation of on-site plumbing and/or occupational registration.

The NPRF is the national policy advisory body with responsibility for the policy direction relating to technical matters associated with the Code.

The NPRF has a mission to provide benefits to Australian Governments, the industry and the public by striving for a consistent, efficient and effective regulatory environment for plumbing activities, and achieve appropriate levels of public health, safety, resource and environment conservation, sustainability and amenity, in the interest of all consumers throughout Australia.

Plumbing Code of Australia - Content

The goal of the Code is to enable the achievement of an acceptable standard of installation at all times in order to provide for public health, safety and amenity, resource and environment conservation, sustainability and protection of public and private infrastructure for the benefit of the community now and in the future.

The goal is applied so that the requirements in the Code extend no further than is necessary in the public interest, are cost effective, easily understood and are not needlessly onerous in their application.

To achieve the above goal, the Code:

- creates an accountable and transparent framework for product authorisation;
- establishes national objectives for plumbing work on a performance basis;
- fosters water and energy conservation;
- encourages best practice;
- references effective solutions;
- calls up relevant Australian Standards; and
- is compatible with the Building Code of Australia (BCA).

The Code sets out performance-based technical provisions for the design, construction, installation, replacement, repair, alteration and maintenance of plumbing and drainage installations throughout Australia.

Also set out in the Code are the requirements for the use of materials and products in plumbing and drainage installations. It defines the processes for the certification and authorisation of materials and products that require statutory authorisation to enable their use in plumbing and drainage installations.

The requirements in the Code are designed to ensure that any plumbing and drainage installation is fit for its intended purpose, do not have an adverse impact on the environment and can continue to function as intended without excessive maintenance.

It is to be noted that the Code may need to be used in conjunction with the BCA which contains detailed provisions for the design and construction of buildings and other structures relating to building integrity and occupancy.

State and Territory Legislative arrangement

The Code is only given legal effect by relevant legislation in each State and Territory. This legislation consists of an Act and subordinate legislation which empowers the regulation of certain aspects of plumbing installation and contains the administrative provisions necessary to give effect to the legislation.

The adoption of the Code by a State or Territory could be subject to the variation or deletion of some of its provisions, or the addition of extra provisions.

Any provision of the Code may be overridden by, or subject to, State and Territory legislation. The Code, therefore, is to be read in conjunction with that legislation. The Plumbing Code of Australia is available from Standards Australia.

For further information on this and the Mawson Lakes article:

SA Water

Telephone: 1300 650 950

Website: www.sawater.com.au

New Products

Details will shortly be circulated regarding the following products which have been approved by the DH:

- JOWA Group / Biocycle pressurized subsurface irrigation system
- Sun-Mar Excel Waterless Composting Toilet distributed by Nature Loo (2 units per household).
- MONO Sewer Ejection Pump Station, with sump capacities of 950L and 1450L.

CONTACT US

For any further information regarding newsletter content or to raise issues/ provide feedback, please contact us:

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